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THE NATURAL METHOD.

SINCE the time of Pestalozzi educators have slowly but gradually come to recognize the sequence in which the faculties of the mind are developed, and to determine the kind of material necessary in the development of each. But while respect is had to the natural evolution of these, there is yet much random work and experimenting as to methods. Modern systems of education, though not in a nebulous state, as Spencer in the ardor of an advocate maintains, have not yet reached perfection. To accept certain principles, and to devise a system that will put those principles into successful practice, are two very different things; fine-spun theories often overlook local conditions, and adventitious facts are apt to disturb the nicest calculations. That the natural order for a hearing child is to understand language before using it needs no confirmation, but how best to secure such a condition in the case of the deaf seems yet to be an open question. Dr. Alexander Graham Bell would have us return to the crude and unphilosophical methods prevailing before Pestalozzi caused the world to think: the plan of blank memorizing, suggested in his address before the Jackson Conference of Principals, is wide of the process by which the hearing come to understand language.

It is the purpose of this paper to gather up some of the principles that have become authentic, as manifested in the mental growth of the hearing, and determine how nearly they apply to the education of the deaf. It is not designed here to consider all the faculties of the mind and the manner of their development, but how best their needs may be conjointly subserved, to the end that they be prepared for mastering that higher classified knowledge which all our school curricula in a measure require. Two general topics will be considered, viz:

The manner of imparting knowledge, and the kind of knowledge to be imparted. The second is implied in the first, and will be treated but little more than incidentally.

The youthful mind seeks the simplest kind of knowledge; the powers of analysis and synthesis being little developed, it apprehends objects of thought as wholes, and takes them in singly. We to whom acquisition is comparatively easy do not always realize this; we expect too much of our pupils; we expect them to begin where we were after having acquired that vast amount of knowledge gained through the early processes of observation, induction, and analysis. They are, moreover, required with one bound to grasp the knowledge, and gain a mastery of the forms in which it is clothed. This, as Spencer tells us, is impossible. "In proportion as there is attention to the signs there must be inattention to the things signified."

The writer remembers his own experience when studying Greek and Latin. Whether the text was history or some discussion in ethics, both the facts and the language were foreign to him, and he necessarily fell into the habit of memorizing the language without having a distinct conception of the knowledge it embodied. The process was little else than a translation by rote, and the forms upon which so much labor had been expended soon dropped out of memory. Had the facts been first gained the acquisition of their symbols would have been easier and more enduring. Such is the experience of our pupils when required to learn in a similar way, except that the possibility of any benefit accruing is still more remote. Spencer's stricture of the rote-system may be paraphrased and appropriately applied here: To repeat the words correctly is everything; to understand their meaning nothing, and thus the spirit is sacrificed to the letter. All memorizing of propositions without an understanding of them is useless; time and energy are expended thereby with no return. It is worse than useless; it is like loading down the stomach with food which it cannot digest. Persistent indulgence in the latter brings on dyspepsia, and extended practice of the former makes the mind listless, inactive, chronically weary.

The material acquired in this way can never be used until it is indued with life; it is but as husks, burrs without chestnuts. The concepts embodied reaching not the inner consciousness of the child, all the life-giving vitality is eliminated. Husks and burrs are a poor substitute for their contents to appease

the aching void, and the forms of thought are in themselves no food for the mind. The rubbish—for so it may be justly characterized—which thus gains entrance into the mental storehouse of the child must be brushed aside; it is an obstruction rather than a help. We have all witnessed and probably experienced the propensity of a school-boy to use phraseology beyond the scope of his ideas, and we now laugh at the oft ridiculous results of such efforts, but with the deaf this propensity degenerates into a grievous habit when they "read" mechanically, picking up phraseology the thoughts of which have not been fused with their personality.

Dr. Bell is eminently correct in his premise that the natural order is to understand language before using it, but in formulating his theory for the deaf he evidently loses sight of the very important fact that children come to understand expressions by hearing them repeatedly applied. He would have the deaf worry over pages of printed characters representing things beyond the range of their observation or thought; he would accordingly reverse the natural order, for to *read* and to *memorize* is to *use* language. When a hearing child pronounces phraseology which he does not understand no benefit is derived, except such as comes from the exercise of the vocal organs; there is no intellectual gain, the words thus spoken being a mere babel, articulate yet meaningless sounds, such as are produced by a parrot. The only benefit worthy of mention is derived from observing the application of terms repeatedly heard and in turn properly using them to clothe one's own thoughts, to which there is no analogy in a deaf child's committing to memory language that he does not understand. On the one hand, intelligence is transmitted, and acquisition is involuntary; on the other hand, the material acquired adds nothing to thought, and the operation is voluntary and painful. Is there anything in common between the two processes and between their products?

The hearing learn language without much thought or effort. It requires but small ability for them to acquire the phraseology of every-day affairs and of conventional chit-chat. That the deaf may do the same we must make them thinkers; their latent powers of mind must be thoroughly awakened, developed, and strengthened, and this can only be done by making them close observers. Mere absorbing machines will never attain proficiency in speech. How shall we proceed? The

rule of Bacon is *ipsis consuescere rebus*—to accustom ourselves to things themselves. This we must observe in order to impart an intelligent notion of the forms, properties, relations, and changes of things, and of their expression in language. The pupil must acquire his elementary knowledge by direct perception of the objects themselves, and the language should not be imparted until the facts which it clothes are learned. This is the great law in the art of teaching, to which all others are subordinate.

Accuracy of thinking presupposes quite a fund of assimilated knowledge. This the memory furnishes to the imagination and to the power of comparison, from which to form new concepts. Knowledge of a permanent character is held by the mind in concepts, and in these all our thinking is done; if they are complete, as nature intends, and are held in sufficient number conception is adequate, and correct thought will follow. But the primary concepts, upon which the mind builds, must be acquired by perception; they cannot be imparted through language, nor can the mind be supposed to possess them without positive previous experience. Even the categories of thought, the truths believed to be intuitively known, are only evolved by the mind upon application. The concepts then are acquired by induction; certain attributes are seen to be possessed in common, and a class is formed, a concept evolved, to which a name is given. To teach the name before this process of induction is carried out, or to require the child to learn the name before it is applied to a number of individual facts belonging to the class, is reversing the order of nature. It is often taken for granted that the process of induction has been accomplished, and the term is consequently given; but even in such a case a child is not always competent to identify the term with the concept, except by direct application.

Language serves to awaken the remembrance of images gained by observation, or, by analogy to those already in possession, to form new images; but to do the latter the knowledge previously acquired must be considerable, and the powers of comparison and judgment must be pretty well developed, or the result is as crude as the product of the cliff dweller's efforts at art. The mind refers the concept to an individual fact for verification; where the power to generalize is little developed, the tendency is to individualize general notions by clothing them with the attributes of particular facts known,

whether they be entirely appropriate or not. Noah Porter very aptly speaks of this in his "Intellectual Science:"

> Every man imagines the concepts which he employs or hears of by examples that are peculiar to himself, and which are derived from his individual experience or observation. An Esquimaux, a Chinese, and a European would picture very different objects to the imagination on hearing or reading the word state, legislation, wealth, money, wages, civilization, fashion; and even the more concrete terms, house, city, ship, oar, sail, knife, feast, procession, township, and meadow.

The insufficiency of mere language is further apparent from its failure to give even those possessed of varied and extensive knowledge, whose minds have grasped most complicated concepts, a clear and full impression of a scene in nature. How meagre must be the ideas received from Mark Twain's inimitable description of the Alpine scenery when compared with those of one who is permitted to "dwell beneath the avalanche!" How far short of the reality are the notions afforded by Longfellow's beautiful poem, "Sunset on the Hills," or St. Mark's terse but pointed account of the "Transfiguration," or Victor Hugo's masterly description of the battle of Waterloo! The writer once witnessed a scene in the Rocky Mountains that he will never forget. The light of the sun pierced a huge rift in the rocks, was refracted through a cloud, and thrown back upon the mountain. What with the green background and the outlines of brilliant and variegated colors, the image carried away from the scene is one to which that produced upon the mind by the most graphic and complete description of which language is capable would be but as a shadow. Thus it is with many facts, both abstract and concrete, of which one has had no direct or analogous experience: language can do them but feeble justice. An Indian inhabiting the wilds of the West all his life would receive from a description but an indifferent image of the varied phases of city life; a native of Congo would have no notion worthy the name of the grand aspect presented by a locomotive and a train of cars; a Russian or a Chinaman, subject to despotism, would obtain rather an indefinite idea of American institutions. But we need not go to the barbarous or the half-civilized for examples similar to the last named. The civil institutions of England are much like our own, yet not infrequently great ignorance of American institutions is manifested by English papers and Englishmen of note. Is it not evident, therefore, that a child just acquiring

the rudiments of knowledge can hardly gain, through an unaccustomed medium, any correct idea of distant things, and is the plan not unwise which requires that a child so conditioned shall deal with scenes, events, transactions, and customs remote both in time and place?

Porter says again: "When I pronounce such words as *white, red, sweet, sour*, etc., I presuppose that the person to whom I address them has known by experience, *i. e.*, by intuition, what they signify. If he has had no intuition or analogous experience of them my words convey to him no meaning." The notions of color, of form, of number, of comparative size, of absolute and comparative weight, of relationship in position, etc., and the judgment which affirms them of objects, are developed by observation or by the use of sufficient data to make them correct. These are the material for primary instruction; only from them as a basis can the work extend to the abstract and the more remote. To close this part of the discussion with a few anecdotes may not come amiss.

The writer recently happened upon a series of mathematical deductions based upon a proposition in Euclid, but as there was not a copy of Euclid at hand to enable him to trace the reasoning from its source he was lost in a maze of unintelligible predication; though understanding the individual words, he had but a slight conception of what their relation affirmed. This recalled the case of a deaf boy who had come under his observation. The boy never advanced much beyond the ability to recognize individual words. He would often take a paper and run his finger along the lines to find words he knew, and this he called reading.

A successful teacher once told the writer of a girl who was in the habit of memorizing her lessons with no conception of their meaning. She had reduced the process to an art, so that she would come to her recitation without the omission of a word, syllable, or punctuation mark. To determine the extent to which she would carry her art the teacher one evening gave her a lesson in a French book to "learn." Upon entering the school-room the next morning she was asked whether she knew her lesson and replied that she did. The teacher then had her close the book and write what she had learned. The passage assigned was reproduced verbatim, with its peculiar French elisions, apostrophes, and accents. This girl had been started

by the rote-system. Concentration of thought had never been developed in her, and she did not know how to study.

These two are, of course, extreme cases, but it is probable that all pupils who are given the task of acquiring, through a medium almost as strange to them as French, knowledge of facts of which they have had no direct or analogous experience will act in a somewhat similar manner. The operation in the majority of cases is easily analyzed: recognition of individual words and blank memorizing. Any probable digression is necessarily in the direction of simple imagination, to which Porter refers when he says, "Children when left to themselves group together objects in singular combinations and discern resemblances between things which older people would never think of connecting."

The statement made by a recent writer in the *Annals* that the deaf are wanting in imagination seems erroneous. The lack of confidence and the suspicion attributed to them, if true, is rather an indication of too much imagination. The law is that the quantum of imagination, aside from natural constitution, and within certain limits, is inversely as information, or, in other words, as the latter increases the former becomes less intense, absorbent, and exclusive. When the information is meagre the mind is necessitated to combine the few facts of perception known in consciousness and their elements to furnish it with new materials for thought. It is well known that no other class of intelligent beings can produce specimens of equal age possessed of a smaller aggregate of facts, and a narrower range of accurate concepts than the uneducated deaf. The conclusion is that their imagination is more active, in proportion, than that of hearing children of the same age. The system of education, therefore, which has for a primary aim the development of their imagination is erroneous; it seeks to stimulate what is already possessed in superabundance, and what, in the economy of the mind at that stage of its development, acts spontaneously and persistently.

This is shown by the waywardness of the child's mind. Locke says, "He that will observe children will find that, even when they endeavor their utmost, they cannot keep their minds from straggling." Of no children, regarded as mentally sound, is this more true than of the deaf. Directly a fact is presented to them, their minds are impelled from the object of attention to seek, through a natural obedience to the law of

association, to form new combinations, and they need constantly to be recalled from their wanderings. From the very condition of things such combinations are often exaggerated, grotesque, and false. Present knowledge by means of its symbols to a person whose perceptive faculties are untrained, and whose acquired facts are few, and misconception will often follow; the imagination proceeds to make use of the few facts known in consciousness as a basis of combination, and the knowledge is apt to lose its identity in the child's mind, the elements of the combination and also their relation not being identical with the original.

To endeavor, then, to use the imagination of a child primarily as a reliable instrument of education is unphilosophical and illogical; it is beginning at the wrong end, and the more this is done the less competent will the child be for applying itself to the work of gaining knowledge. There is absolutely no need of paying any attention to the imagination until there is a preponderance of knowledge obtained through perception. Not only is the imagination sufficient at this stage, but the natural tendency is to further develop a faculty whose exercise is easy and agreeable, to the neglect of those whose exercise is attended with effort and pain. Sir William Hamilton says:

> As the exercise of a power is the only means by which it is invigorated, but as, at the same time, this exercise, until the development be accomplished, elicits imperfect, and therefore painful, or at least less pleasurable, energy, it follows that those faculties which stand the most in need of cultivation are precisely those which the least secure it; while, on the contrary, those which are already more fully developed are precisely those which present the strongest inducements for their still higher invigoration.

This needs no comment; our own experience verifies it. To tax the faculties beyond their tendency to spontaneous energy, moreover, renders their exercise painful, and jades the mind. Such is often the case with those methods, whether they comprise the use of signs, written or spelled characters, or books, which seek to impart knowledge indirectly. The imagination is appealed to, while the native force of the mind must be expended upon attention, imagination, and reason together, and the result is weariness, disgust, and neglect of attention.

The suggestion is incorrect that by object teaching, by presenting materials for thought directly to the mind, the imagination is not exercised, and receives no impulse. The very

materials with which it deals are the products of perception, and the more of such materials it has, the more reliable it becomes, the less liable it is to lead the mind into error. That its work may be more than a mere fantasy, that it be not a fine or a rude frenzy, nor exerted in the borderland to nothingness —unsubstantial dreams—it needs a broad basis of reality. "He who has imagination without learning has wings and no feet," and as long as we are created to move and have our being upon *terra firma* we have less need of wings than of feet.

To summarize briefly, the natural order of imparting knowledge is from the near and observed to the distant; from the known to the unknown; from the simple to the complicated; and the notion should precede or go with the term.

We come now to a discussion of the practical. How shall we teach the elements of language? A careful study of all the mental energies engaged in the act of acquiring points us to action-writing and object lessons. These please the child and fix his attention; the ideas are first made his own property and he can then give his entire attention to their expression. By bringing the degree of attention required within his capacity we induce him to exercise that power, and thus it can be gradually strengthened; the rote-system distracts the attention and virtually prevents its exercise, *pluribus intentus minor est ad singula sensus.*

Writing fixes in the memory the forms of speech more accurately and more permanently than reading. The power of recollection is thereby constantly exercised; the mind is active instead of being merely receptive. That is the mental state needed. Says Wayland in his Intellectual Philosophy: "The control of the will over our faculties is much assisted by the use of the pen." Facility of speech can only be gained by actual use. Ready and accurate talkers or writers have acquired their proficiency by practice.

The ability to understand language does not always imply a ready command of it. The writer has a smattering of several foreign tongues, so that he can understand an ordinary conversation in them, but an attempt on his part to speak them would be attended with stammering and inaccuracies. In order that he may learn to speak any one of these languages correctly and fluently he must practise the moulding of his own thoughts in its forms. This is the plan by which foreign lan-

guages are taught in advanced modern schools, and if we depart from it with the deaf we take a step backward. Our pupils should accordingly be made *to write from the very beginning.* Their frequent mistakes ought not to deter us. Hearing children, just beginning to talk, make mistakes; their speech is often fragmentary and incoherent, and their efforts to express themselves are sometimes painful, yet we encourage those efforts. We shower words at the ears of children for two years, says Dr. Bell, before we expect them to turn around and talk to us, but it does not follow that they recognize the application of words any considerable time before endeavoring to express their wants in them. Moreover, our pupils, coming to us at the age of eight or ten, cannot be regarded as on a level with a child in the cradle; their minds are already awakened and they have the power in a measure to associate words with ideas.

Let us then require our pupils to write constantly, commencing with the simplest forms and advancing systematically to the more difficult. As materials for the work, let us introduce into the school-room all the ordinary physical acts and common transactions of life practicable, demonstrating, also, with the objects about us, their attributes and relations. When the pupils have advanced into geography and history let us show them vegetable and mineral products, describing their uses; illustrate the physical aspects of a country with sand-tables, diagrams, and pictures; have battles; hold elections, courts, legislatures, inaugurations, etc. They will thus go out into the world with some definite knowledge of it, and with the ability to express what they know.

There is, however, no desire here to discourage the reading habit, for on that mainly depends the advancement of the deaf after their school years are over, but they should first be given narrations of local occurrences which they have witnessed, or with which they are thoroughly acquainted. Following are two reading lessons prepared by one of our teachers, and printed upon slips of paper, for a primary class:

I.

Mr. Spain is very tall. He has a black coat and vest. He sleeps in a small room in the boys' dormitory.

The little boys sweep the yard. They pick up papers. They put them into the wheelbarrow. They fill the wheelbarrow with the papers. They throw the papers out of the wheelbarrow. Many boys play near

the wood-pile. Willie may play with sticks and stones, and pieces of glass.

Mr. Turner has a little colt. The colt is very pretty.

Willie Yeker carried a handful of stones into the school-room. He put them on a desk.

II.

Charlie Harrison took off his coat. He hung it on a small tree. A cow saw the coat. She wanted it. She pulled it from the tree, and ate part of it. It was Charlie's new coat. He has no new coat now. He has an old one. Some boys laughed at Charlie. He cried. He wants a new coat. Mr. Taylor will write to his father. His father will get a new coat for him.

These are given as samples; they are better for the pupils of that particular class than any primary book published, because the facts bring the language home to them. When the force and meaning of certain expressions are once understood they can be applied to things and occurrences at a distance, but not until a considerable fund of them are mastered can general reading be made profitable. We should teach our pupils language, so that they may be able to read intelligently, and so that they *will* read.

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VOWEL MEASUREMENTS.

[This article is reprinted, by permission, from the *Publications of the Modern Language Association of America*, 1890, in the hope that our articulation teachers may find it suggestive and useful in their work, and that they may be induced to make investigations of their own in the same direction, and thus contribute something of value to the general stock of phonetic knowledge.—E. A. F.]

In a paper addressed to linguists and phoneticians it were superfluous to dwell upon the importance of phonetics. All scholars interested in philological research or in modern language instruction must be aware that the teaching of living tongues is greatly improved by a knowledge of phonetics, and that without this science the satisfactory pursuit of comparative philology is impossible. Whatever be the system we adopt in the French and German courses of our colleges and schools, we must admit that pronunciation is an essential element; and the intelligent teaching of pronunciation demands an acquaintance with the physical action by which the sounds of human

speech are created and modified. The American teacher, if he have exceptional advantages and an unusually delicate ear, may perhaps be able by mere imitation to acquire a correct foreign accent himself, but neither he nor the foreigner can ever, without a knowledge of phonetics, tell his pupils how to reproduce it. As for the science which we commonly call philology, it consists mainly of the study of sound-changes; and the only solid foundation for such study is, obviously, a thorough mastery of the principles of sound-production.

Knowing these things, we cannot but regret that such an important branch of learning is, in spite of the wonderful achievements of a few investigators, neither widely pursued nor firmly established. In fact, much remains to be done before phonetics, as a whole, can be acceptably presented to the public. This being the case, is it not the duty of every one concerned with philology to do his share toward the development of the parent science? It seems to me that it is, and that belief has impelled me to contribute my mite to the neglected cause.

Before entering on a course of original research, one naturally makes the practical inquiry: Which part of the subject is in greatest need of more light? In respect to phonetics this question is easily answered: what we most want is accurate information concerning the pronunciation of vowels. The acoustic relations of both vowels and consonants have been thoroughly studied; and, although the reports of various experts disagree, we know as much about this topic as is necessary for philological or pedagogical purposes. Phoneticians are, in the main, agreed as to the formation of the consonants; some matters, such as the tongue-positions for *s* and *sh*, are not quite clear; but in most cases tongue-painting has furnished us with conclusive evidence.* With regard to the vowels, however, there is, owing to our imperfect knowledge of the subject, a sad lack of harmony. Admirable work has been done by several men; without their studies such further investigation as I am about to propose would be inconceivable; and if they have failed to convince the learned world, or even fully to agree among themselves, it is perhaps because they and their followers have had to contend with three drawbacks. In the first place, being so few, instead of confining themselves to their own dialects, they felt obliged to attempt the analysis of a host of foreign sounds, many of which must inevitably have been ill pronounced. This

* See Techmer, *Internationale Zeitschrift*, i, I, Tab. iv.

broad method was doubtless necessary at first; but, thanks to the results obtained by it, we can now demand something more precise. Secondly, they adopted, in general, no system of real measurement, but trusted mainly to sensation and to ocular observation. Now there are very few vowels during the emission of which we can look well into the mouth through its normal aperture; and if we lower the jaw more than usual, we cannot utter the sounds in a natural way.* For most vowels, then, mere ocular examination is an unsafe guide. Still more uncertain is sensation; for feeling depends far less on the actual movements of the organs than on the preconceived idea in the observer's mind.† So far as I know, the only actual measurements of any importance made hitherto are those of Merkel;‡ and even his are really systematic and trustworthy only for the movements of the jaw. The third hindrance to which I referred is the wellnigh irresistible tendency to construct theories on insufficient data. Many investigators have, I fear, designed their system first, and then pared off the toes and heels of their facts to make them fit the symmetrical slipper into which they were to be thrust. It should, nevertheless, be said that the systematizing tendency has brought forth good as well as evil; for without it we should scarcely have seen that scheme of vowel-classification which has made modern phonetics possible.

If, then, we wish to improve on the work done hitherto, we must observe these four rules: begin your examination with a

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* See an article by Professor Sheldon and myself, called "Phonetic Compensations," in *Mod. Lang. Notes*, III, 6. This kind of compensation is, I think, illustrated in the chart that accompanies Dr. Techmer's pamphlet, "Zur Veranschaulichung der Lautbildung" (Barth, Leipzig, 1885): if I remember his pronunciation rightly, the author forms *a*, as I do, with the tongue lying nearly flat in the bottom of the mouth; but in the drawing, which represents a man uttering *a* with his mouth stretched open to its widest extent, the middle of the tongue is violently raised, evidently to compensate for the enlargement of the mouth-cavity through unnatural jaw-lowering. Similar compensations are to be noted in *Phonetische Studien*, II, 2, "On the Bell Vowel-System."

† How far a really good observer may be led astray by "sensation" is sadly apparent in some parts of the article "On the Bell Vowel-System," by the late W. R. Evans, *Phonetische Studien*, ii, I.

‡ See "Physiologie der menschlichen Sprache," 1866, pp. 68, 82, 85, 86, 89, 91, 93, 98, 103. See also, however, Vietor, "Phonetik," 1887, p. 36; and Brücke, "Grundzüge der Physiologie und Systematik der Sprachlaute," 1876, pp. 37, 38.

mind free from all prejudice; restrict yourself, in your publication of positive results, to your own dialect or to one with which you are equally familiar;* make no unqualified statement that is not based on careful measurement; conduct your investigations in such a way as not to interfere with the natural utterance of your sounds.

For several years I have been pursuing a series of experiments with a view to ascertaining the best method of vowel-measurement, and I have finally hit upon one that seems to promise good results. I offer it to my fellow-workers such as it is, hoping that, bettered by their criticism, it may prove useful to other investigators.

The subjects of my research are the principal vowels of my native Boston dialect, as I pronounce them in careless speech. They are:

1. ū: † as in "boot," "suit." I measure the second half of the vowel, which is somewhat more rounded than the first. The latter part of my ū sounds nearly like German *u* in *gut* and French *ou* in *doute*, but it has less energetic lip rounding, and seems to be pronounced a little further forward in the mouth.

2. ŭ: the vowel in "bull," "hoof." It regularly takes the place of *ū* before any sound written *r* or *er*, as in "doer," "endure," "insurance," "newer," "poor." A variety of *ŭ* regularly precedes *ū* when that vowel is final or followed by a voiced consonant, as in "do," "room," "rude," "rule," "through" (pronounced *dŭū*, *rūūm*, etc.).

3. ō: as in "boat," "note." I measure the second half, the first half being less rounded.‡ The latter part of my *ō* is very similar in sound to German *o* in *not* and French *ô* in *côte*.

4. â: as in "all," "bought," "daughter," "for," "law;" somewhat similar in sound to French *o* in *tort*, but with less lowering of the jaw and no real rounding.

5. o: the vowel called (when heard in such words as "boat,"

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* In *Phonetische Studien*, iii, p. 114, Sweet says: "The only observations that can be fully relied on are those made by trained observers on themselves."

† The "long" and "short" marks are used in this article merely to distinguish different vowel-qualities: they have no reference to quantity. The correspondence of my symbols with those used by the American Dialect Society is as follows: my ū = Am. Dial. Soc. û, ū=u, ō=ô, â=ɔ, o=ò, u=ʊ, ë=ë, ŏ=o, a=a, e=ə, i=î, I=i, é=ê, ĕ=e, ă=æ.

‡ See Sweet, "Primer of Phonetics," 1890, p. 75.

"road," "stone") "short New England *o*." In my dialect, however, it exists only in the following cases: first, in the word "whole" and its compounds; second, in the diphthong *oĕ* in "boy," "moist," etc.; third, instead of *ō* before any sound written *r* or *er* (as in "door," "roaring," "slower," "store"); fourth, in unaccented syllables of some words oftener seen than heard (as "phonetic"=*fonĕtĭk*, "November"=*novĕmbe*; but "polite"=*pelaĭt*). A sound intermediate between *ō* and *o* regularly precedes *ō* when that vowel is final or followed by a voiced consonant, as in "bowl," "home," "road," "so" (pronounced *boōl*, *hoōm*, etc.). My *o* seems somewhat similar to French *o* in *bonne*, *botte*, *homme*, *poli*, but is apparently pronounced further back in the mouth.

6. u: as in "but," "come," "enough," "squirrel," and sometimes in "got," "what." It is also the vowel that takes the place of an *r* (except *r* between spoken vowels) or final *-er*, after *ŭ*, *â*, and *o* (as in "sure" or "shoer," "nor" or "gnawer," "sore" or "sewer": pronounced *shŭu*, *nâu*, *sou*).

7. ĕ: as in "bird," "nerve," "nurse," "pearl," "sir."

8. ŏ: as in "hot," "John," "to-morrow." My ŏ is unrounded, and hence unlike that of Sweet and of some Americans, from which it seems to differ also in other respects. When pronounced with the mouth very wide open, it sounds strikingly like French *â* in *pâte*.*

9. a: as in "ask," "far," "father," "hard," "pass," "quarrel," and sometimes in "got," "what." A forward variety of it forms the first element of *aĭ* (as in "I," "die," "eye," "height," "light"); a slightly retracted variety forms the first element of *aŭ* (as in "cow," "out," "plough").

10. e: the unaccented vowel in "again," "better," "ogre," "sofa." It takes the place of an *r* (except *r* between spoken vowels) or final *-er*, after *ĭ* and *ĕ* (as in "dear," "payer," "there": pronounced *dĭe pĕe*, etc.).

11. i: as in "eat," "feet," "receipt," "suite." I measure the second half of the vowel; the first half tends slightly towards *ĭ*.

12. ĭ: as in "beard," "Erie," "fit," "merely," "near," "steer," "win." An *ĭ* that tends somewhat towards *i* regularly precedes final *i* and *i* before a voiced consonant, as in "fee," "feed" (pronounced *fĭi*, *fĭid*.) When *ĭ* is unaccented, as in the last syllable of *sĭtĭ* ("city") or *nêkĭd* ("naked"), it is slightly flattened and

* See *Phonetische Studien*, i, 2, p. 171; and Sweet, "Primer of Phonetics," 1890, pp. 76 and 85.

retracted, approaching *é* in sound. Compare Sweet's "Primer of Phonetics," pages 15, 74, and 77.

13. é: as in "fate," "great," "straight." I measure the second half; the first half tends slightly toward *è*.

14. ĕ: as in "bet," "fare," "mayor," "men," "stair," "tear," "their," "where." A variety of this *ĕ* regularly precedes final *é* and *é* before a voiced consonant, as in "afraid," "bathe," "blaze," "name," "rail," "rain," "say," "they," "weigh" (pronounced *efrĕĕd*, etc.). Compare Sweet's "Primer of Phonetics," page 74.

15. ă: as in "cat," "man."

These fifteen vowels, then, are to be analyzed. What are the organs whose positions we must determine? The raw material of all spoken vowels is, as every one knows, the sound borne in the vibrating breath that rises from the larynx. This sound passes, on its way to the outer air, through a large resonance-chamber and a comparatively small orifice. Sometimes there are two spaces and two openings. What we must ascertain for every vowel is the size, shape, and place both of the cavity or cavities and of the narrow passage or passages. These factors are determined by the form and position of the lips, jaw, tongue, epiglottis, and soft palate. If the larynx perceptibly rises and falls as we go from one vowel to another, its movement must change the dimensions of the pharynx, and should therefore be noted also.* In my case, however, this motion of the larynx is altogether too slight to be measured. The protrusion and retraction of the hyoid bone are connected with the movements of the tongue, and need not be separately studied.† There remain, then, the five organs just enumerated, whose changes of shape and location we must carefully examine.

The easiest measurements are, obviously, those of the lips and jaw: with these we shall begin. In performing the following experiments it is of the greatest importance to pronounce the vowels naturally. It is perhaps best to look away for a few moments from the mirror before which all these investigations must be pursued, and speak over and over again a common word containing the desired vowel; then, by glanc-

* Merkel ("Physiologie der menschlichen Sprache," p. 103) notes a very decided rise and fall of the larynx. Techmer (*Internationale Zeitschrift*, i, I, Tab. iii) indicates something similar.

† See *Mod. Lang. Notes*, III, 6, p. 364.

ing suddenly back at the glass, the real lip-position can be caught. To draw the outlines of the lips correctly, four measurements, which can be taken with a slip of paper, will probably be found necessary—those marked in Figure 1* AD, and BC, *ad*, and *bc*. The rest can be drawn free-hand. I give figures showing the lip-positions for all my vowels. It will be seen that the general outlines are always the same: this is, I think, a characteristic feature of English vowels. My *ü*, *ö*, *ŭ*, *o*, and *ë* are rounded.

The jaw-lowering can be noted by a simple device. On a strip of pasteboard, an inch long by a quarter of an inch wide, is marked a scale of millimeters, with the zero at the bottom. This scale is glued, in a vertical position, to the most prominent part of the chin. A slender stick, about a foot long, is then suspended from the upper part of the face in such a manner that it will hang alongside the pasteboard. The stick is held steady at the lower end by the hand of the experimenter, who now fastens a little pointer to it at such a spot that when the jaws are firmly closed it will be just opposite the zero. This being done, the vowels are pronounced, and the pointer indicates in millimeters the amount of jaw-lowering. The measurements for my vowels are given in the drawings at the end of this article. It is worthy of note that the difference in mouth-opening between my closest and my widest vowels does not exceed four millimeters. In French and German the difference is, of course, far greater.†

We next come to the difficult subject of palate and tongue. Here the greatest drawback is the unwillingness of the organs to perform their natural functions when in contact with any foreign substance. Only by long and patient practice can the rebellious tongue and palate be entirely subjected to their owner's will. It can, however, be done. In the course of varied experiments I have gained sufficient mastery over these sensitive organs to make, at will, either of them assume the correct position for any vowel in my dialect, and retain that position in spite of the presence of a finger or an instrument. Before be-

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* See end of this article.

† Merkel ("Physiologie der menschlichen Sprache," p. 103) makes the difference between *i* and *ä* 7‴. Passy (*Phonetische Studien*, i, I, p. 24) gives diagrams which seem to indicate a little more jaw-lowering. Western ("Englische Lautlehre," 1885, pp. 5 and 83) implies that the distinction between *i* and *ä* is almost entirely a matter of jaw-position.

ginning any systematic measurements it is well thoroughly to explore with the finger all parts of the mouth and as much as possible of the pharynx, with a view both to training and hardening the organs, and to gaining a general knowledge of the movements of tongue and palate. Much can be learned in this way; in fact, for some measurements I have discovered no better method.* Before long it will be found expedient to pronounce the sounds mentally rather than aloud; for when the organs are in the proper position for a vowel, the presence of a finger in the mouth of course diminishes the size of the resonance-chamber and so alters the sound; and the observer, catching this false note, involuntarily shifts his tongue. A helpful instrument in all these researches is a tiny electric light that can be held in the mouth.† With the aid of this burner the outline of the tongue from side to side can be observed from the mouth-aperture, and can be drawn with sufficient accuracy free-hand. Drawings of these outlines for my vowels accompany the representations of lip positions and longitudinal tongue-profiles at the end of this paper. Those for *i̯*, *ĭ*, *e̯*, *ĕ*, and *ă* were made with the head thrown back, and represent the passage between the front part of the tongue and the roots of the teeth; the others represent the highest part of the tongue that can be seen, and the section of the palate that is over it.

For our main investigations the starting-point must be the upper teeth and the hard palate. The first thing to be done is to make an outline drawing of the whole palate from front to back. A cast of the immovable hard palate can be obtained from a dentist, or constructed by the observer himself from a pulp made of tissue paper. After having carefully measured in the mouth the distance (Figure 2, *bc*) from the lower edge of the upper front teeth to the middle of the arch that forms the inner limit of the hard palate, we can take the front part of our outline from the cast. The drawing should include a cross-section of one of the upper front teeth. The back por-

* In his introduction to the *Revue des patois gallo-romans*, i, I, the Abbé Rousselot says, in the course of an "Analyse des sons," in speaking of the vowels (p. 13): "Je ne tiendrai compte ici que des mouvements de la langue et de ceux des lèvres. L'explorateur que j'emploie est tout simplement le doigt."

† I have made use of a small glass bulb enclosing a one-candle-power incandescent burner connected by two thin wires with a three-cell battery.

tion of our line, consisting of the profile of the soft palate, will vary with the different vowels. For every vowel it is best to make several measurements. If we look into the widely-opened mouth, we see that the way into the pharynx leads through a double arch, broken at the top; from the centre of this arch hangs the uvula. After setting the soft palate in the correct position for the vowel,* we take a long, narrow strip of wood, and measure the distance from the edge of the upper front teeth, first to the inner (*bf*), next to the outer (*be*) pharyngeal arch, and then to a point half-way between the outer pharyngeal and the palatal arches (*bd*, Figure 2).† These points being fixed, we can draw the outline of the soft palate. To complete the drawing (Cf. Figure 2), a section of the lower front teeth should be added in the proper position. The lips may, if desired, be outlined also.

Such a drawing as this having been prepared for every one of the fifteen vowels, we can now proceed to the tongue-measurements. For these I have constructed a set of instruments consisting of card-board ovals varying in length from five to twenty-five millimeters, each of which is firmly fastened to a piece of pliable silver wire about six inches long, which projects at right angles from the centre of the ellipse. The observer sits at his desk with the proper drawing before him, and with pencil, mirror, and instruments at hand. He selects the largest instrument that can, so far as he is able to judge, be used for the vowel in question; bends the wire so that it will hold the upright oval as nearly as possible at right angles to the tongue; places the card-board at the very back of the wide-open mouth; then raises the jaw, and, while pronouncing the vowel naturally, pulls the oval forward until it touches simultaneously the palate and the tongue.‡ Thereupon he

* The soft palate can readily be trained to take the proper positions. It is well to begin by watching its movements in natural speech, and then to try holding the tongue down with the finger and uttering the vowels mentally. Before long the tongue will stay down of its own accord, and the soft palate will move independently of it.

† For the sake of greater accuracy (as these data are of the highest importance), we may make some supplementary measurements. Open the mouth wide; determine the exact position of *a* (Figure 2) with reference to *b*; then measure *af*. The positions of *a* and *b*, and the distances *ab*, *af*, and *bf* being known, we can find the exact location of *f*. Similarly we can, if necessary, calculate the positions of *e* and *d*.

‡ Great care should be taken, especially in measuring *i*, *ĭ*, *ĕ*, and *é*, lest the card-board sink into the back of the tongue and thus indicate a false

stops, marks with his thumb-nail the point of the wire that is in contact with the lower edge of the upper front teeth, and then takes the instrument from his mouth and applies it immediately to his drawing, being very careful not to bend the wire. When the instrument occupies on the drawing a place exactly similar to that which it held in the mouth, the top of the ellipse being opposite the palate line, he marks with a dot on the paper the position of the lower end of the oval, thus indicating the point where it rested on the tongue. After that, he takes the next smaller instrument, performs the same experiment, and makes another dot; and so on, until all the available instruments have been used. Then he changes the process, beginning at the big cavity just behind the roots of the teeth, and moving the instruments both backward and forward. For some vowels, of course, he will find that only one of these two sets of measurements will be possible. Finally, by connecting all the dots he has made on the paper, he obtains the longitudinal profile of the tongue for the desired vowel. The shape of the root of the tongue, the size of the pocket between it and the epiglottis, and also the distances between the raised edge of the epiglottis and the back of the tongue on the one hand, and the inner wall of the pharynx on the other, can best be ascertained with the finger.* When these distances are considerable, I have found it a good plan to swing the end of the finger gently from one object to the other, to continue this movement until it becomes, so to speak, habitual, and then, on taking the finger out, to reproduce the swing before a ruler or on the drawing. In this way a tolerably reliable measurement can be made.

The drawings obtained by these methods form the last and the most important portion of this contribution. I would call attention to the fact that the large figures represent a section of the *middle* of the mouth—that is, the highest part of the palate, the lowest part of the central groove in the tongue, the greatest approximation of the front teeth, and the widest lip-opening. The uvula has been omitted. It must be remem-

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position. If this digging into the tongue cannot be avoided, some allowance must be made for it. Much care is required, also, to keep the oval perpendicular to the tongue.

* To admit the finger the mouth must, of course, be opened wider than usual; but this jaw-lowering, which amounts to three-quarters of an inch at the teeth, is far less perceptible at the back of the mouth.

bered, too, that if the jaw be abnormally lowered, the tongue will be correspondingly raised; hence observers looking into their mouths will not be able to see all the tongue-positions as they are depicted here. Students of phonetics will observe that in my dialect there is nothing corresponding to Sweet's definitions of "narrow" and "wide."* I have no doubt that such a distinction exists in the speech of some persons; I can, if I try, make something like it myself for *i* and *ĭ*, *é* and *ĕ*;† but it does not seem to be my natural way of creating a difference between "close" and "open" sounds.

My *a*, *ŏ*, and *ë* are also widely different from Sweet's descriptions;‡ my *u* is probably‡ pronounced further forward; I have not, to the best of my knowledge, his "narrow" *æ* (a vowel between *ĕ* and *ă*), although I often hear it from Americans. My drawings show, further, that most pictures of the tongue-positions for *i*, *ĭ*, *é*, *ĕ*, and *ă* represent the tongue as extending too far back; it really descends sharply just behind the highest point, leaving in the back of the mouth a very big chamber, which seems to be the distinguishing feature of "front" vowels.§ This chamber is, in the case of *i*, *ĭ*, and *é*, connected with the outer air by a long, narrow passage; but for *ĕ* and *ă* the space before the tongue is so widened as to lose its tunnel-like character. *Ū*, *ŭ*, *ō*, and *â* have their principal mouth-cavity in front of the highest part of the tongue: we may, then, aptly call them "back-vowels." My "front" and "back" vowels form two nearly parallel and vertical series. In the case of *ŏ*, *a*, *e*, *o*, *u*, and *ë*, the mouth-chamber is above the whole tongue; but while *ŏ*, *a*, and *e* leave the tongue almost perfectly flat, *o*, *u*, and *ë* require a hump in some part of it. The elevation for *ë* seems to be thinner from front to back, and the tongue less retracted, than for *u* and for *o*, which latter vowel

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* My drawings appear to show a regular gradation from *ă* to *i* and from *â* to *ū*; nearly all German phoneticians have maintained that this was the case with their vowels.

† See Jespersen, "Articulations of Speech Sounds," 1889, p. 17. Sweet himself says, "Primer of Phonetics," 1890, p. 18: "The distinction between narrow and wide is not so clear in the back vowels."

‡ Sweet: "Handbook of Phonetics," 1877, p. 16; "History of English Sounds," 1888, p. 3; "Primer of Phonetics," 1890, pp. 21, 72, 73. In the last work, p. 72, Sweet says of his "mid-back-narrow" *u*: "This vowel is slightly advanced."

§ See *Proceedings of the American Philological Society* for 1884, pp. xxxviii–xl.

is distinguished from *u* only by its rounding and by a slightly higher jaw-position. *ŏ* has a bigger cavity than *a*; *a* differs from *e* in the slope of the epiglottis and back of the tongue, and has also a larger chamber. The biggest mouth-cavities are apparently those of *â** and *i*. I have already stated that my *ŏ* is unrounded; I think I may safely say the same of my *â*. My *ū* and *ō* have, on the other hand, very marked rounding; *ŭ*, *o*, and *ĕ* are less rounded.

Before concluding, I wish to express the hope that other and more competent observers, and especially scholars of different nationalities, may find time to make, by these or other methods, accurate studies of their own vowels. There are many difficulties to be overcome†—some of them I have pointed out—but the work is intensely interesting, and, on the whole, easier perhaps than this scanty account makes it appear. It is, in my opinion, only through comparing the results of many experiments by many men that we can construct a complete and reliable vowel-system.

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Boston, Mass.

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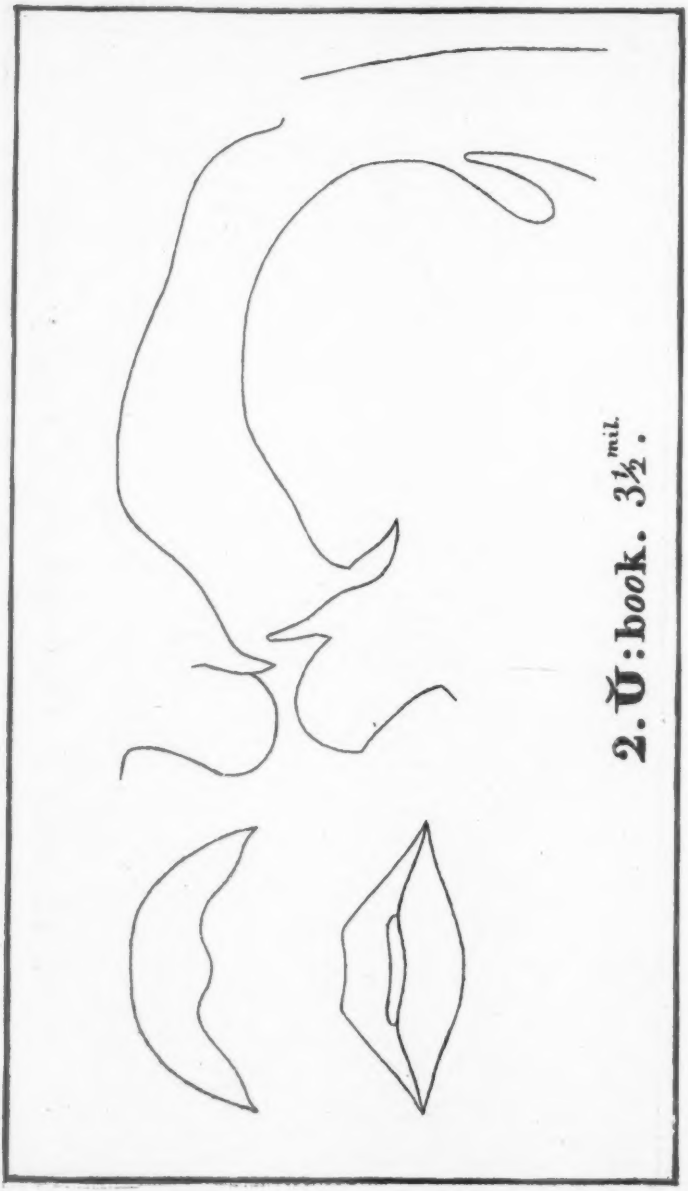
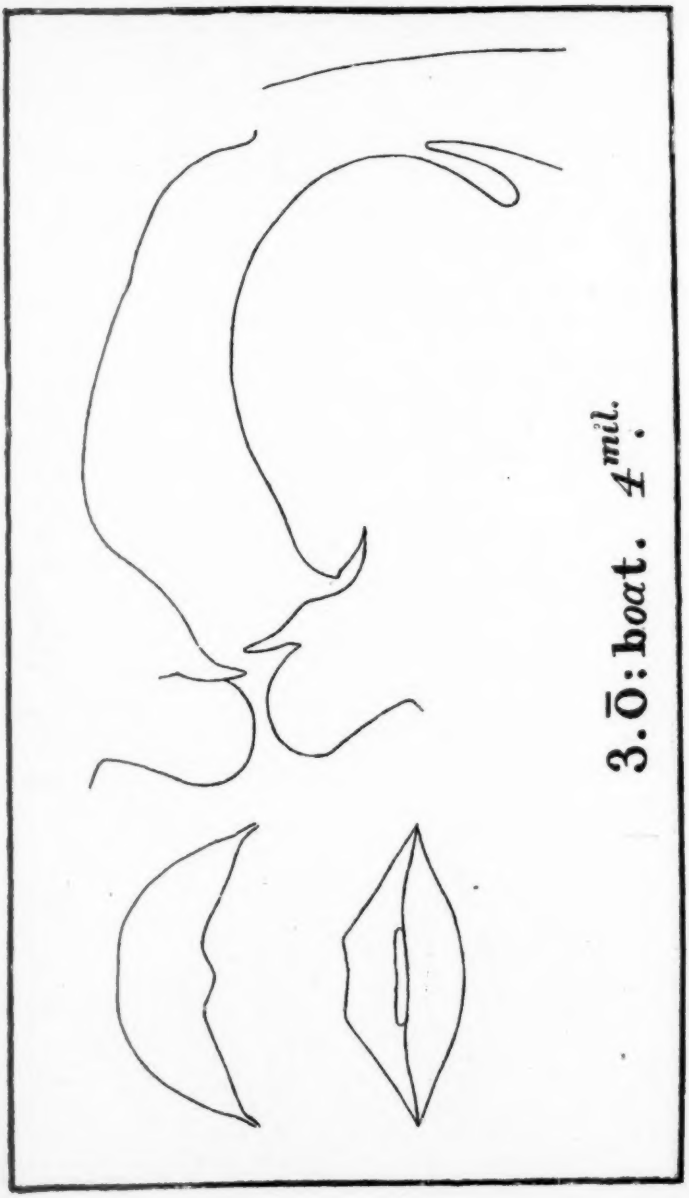
* With persons who round the *â*, the mouth-cavity for that vowel is probably somewhat smaller than with me. Bell, however, says ("Speech Reading and Articulation Teaching," 1890, p. 13): "Enlarge the cavity of the mouth to the utmost . . . . . Emitted . . . voice will then have the quality of what is called the 'Low Back' vowel." I do not see how Vietor can say ("Phonetik," 1887, p. 15): "Bei *u* ist der Resonanzraum im Munde am grössten." It seems to me that no back vowel can have a smaller cavity than *ū*. The low pitch of this vowel is evidently caused by rounding. Cf. Sweet, "Primer of Phonetics," 1890, p. 26.

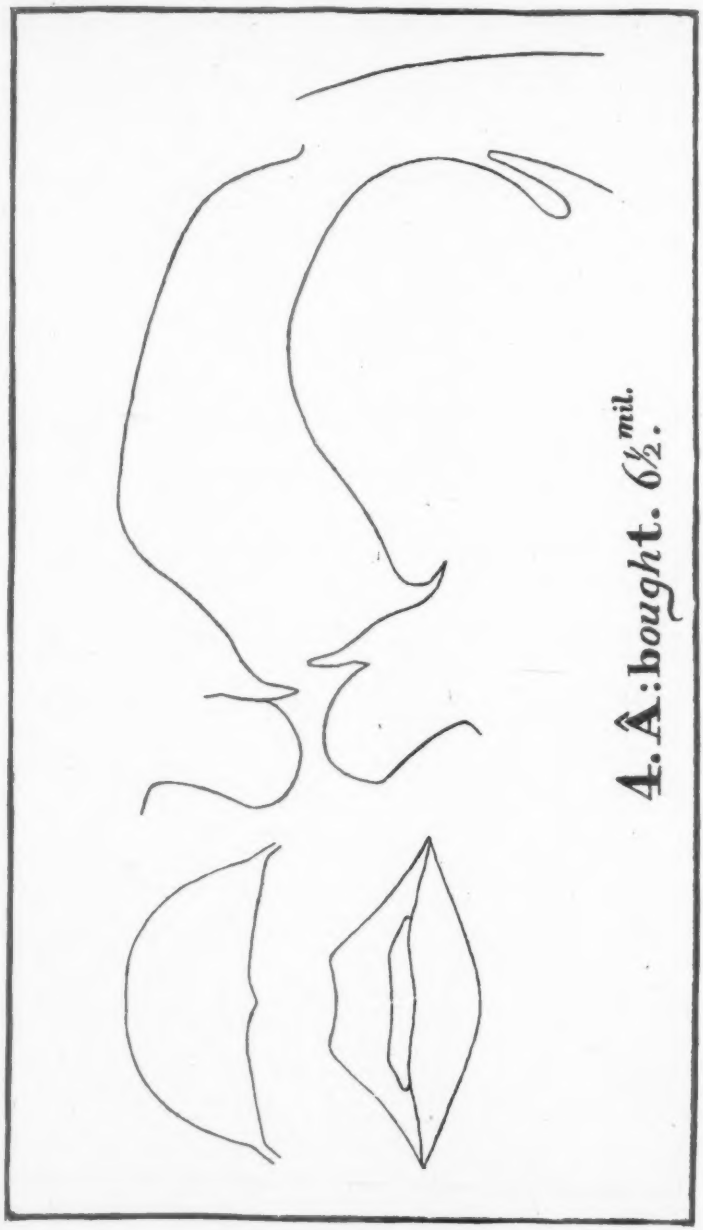
† I ought, perhaps, to say that I made hundreds and hundreds of preparatory measurements before I thought myself sufficiently skilled to begin on the final experiments, the results of which are set forth in this article. The ticklishness of the soft palate, which, at first, is apt to produce choking and retching, can easily be overcome by a little practice; but the sensitiveness of the pharynx, which, if exploration in that region be long continued, is liable to develop into sore throat and coughing, I have never been able to cure. The difference in the effect of contact on the parts touched sometimes affords a clue to the whereabouts of the end of the exploring finger, when that member is not sensitive enough to distinguish, by its own sensation, the soft palate from the inner wall of the pharynx.

1. ū: boot. *Jaw-lowering, 3 millimeters.*

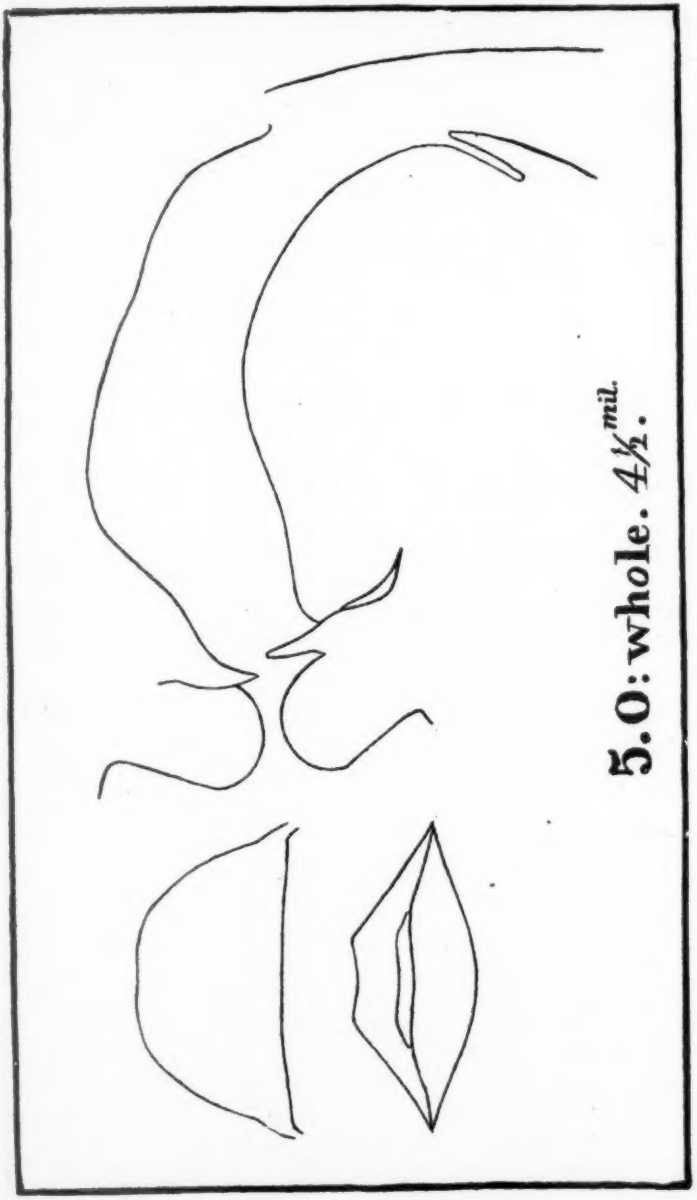


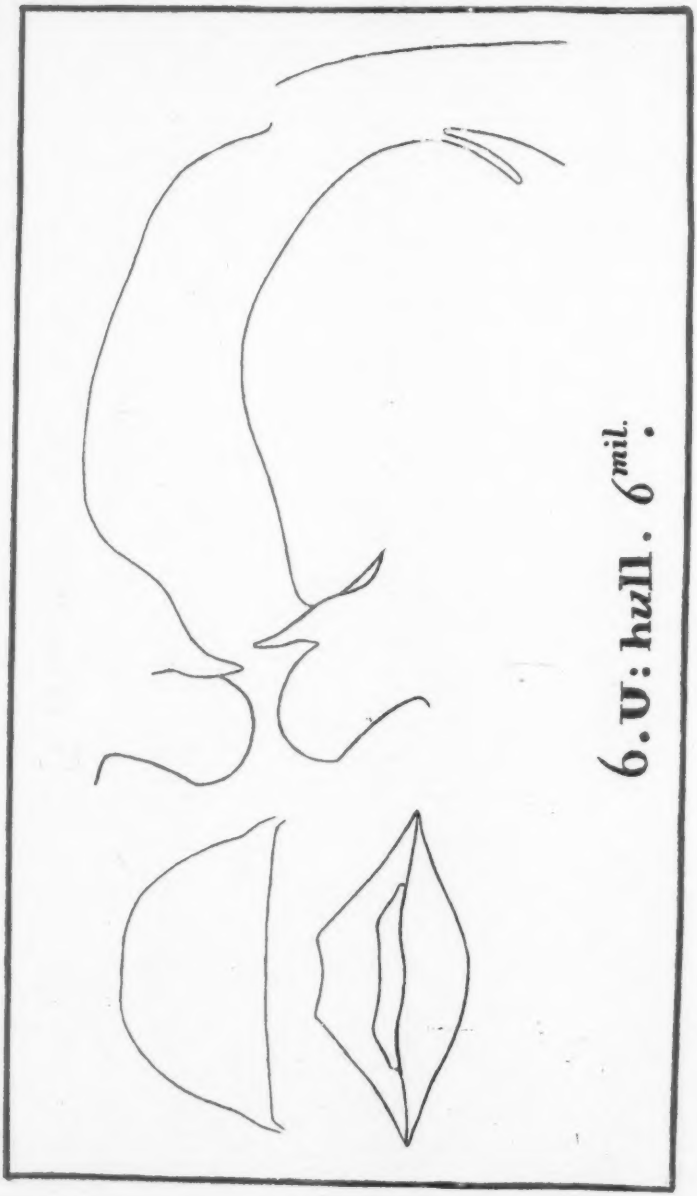
2. ŭ: book. 3½ mil.


3. Ō: boat. 4 mil.

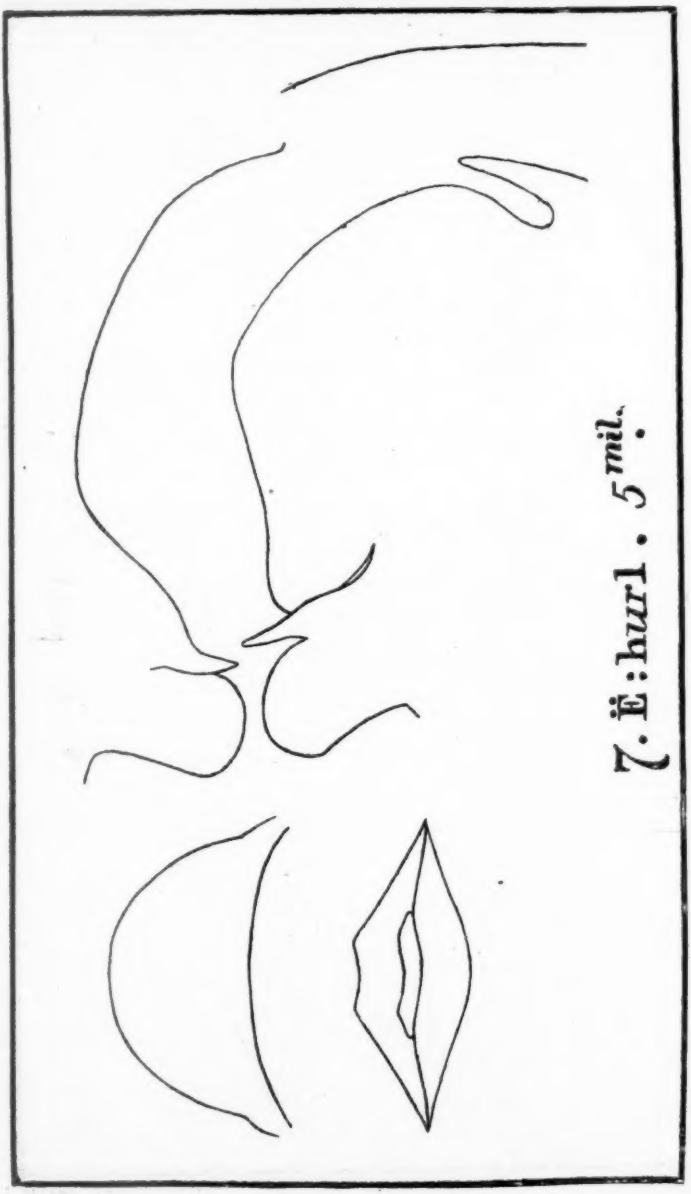


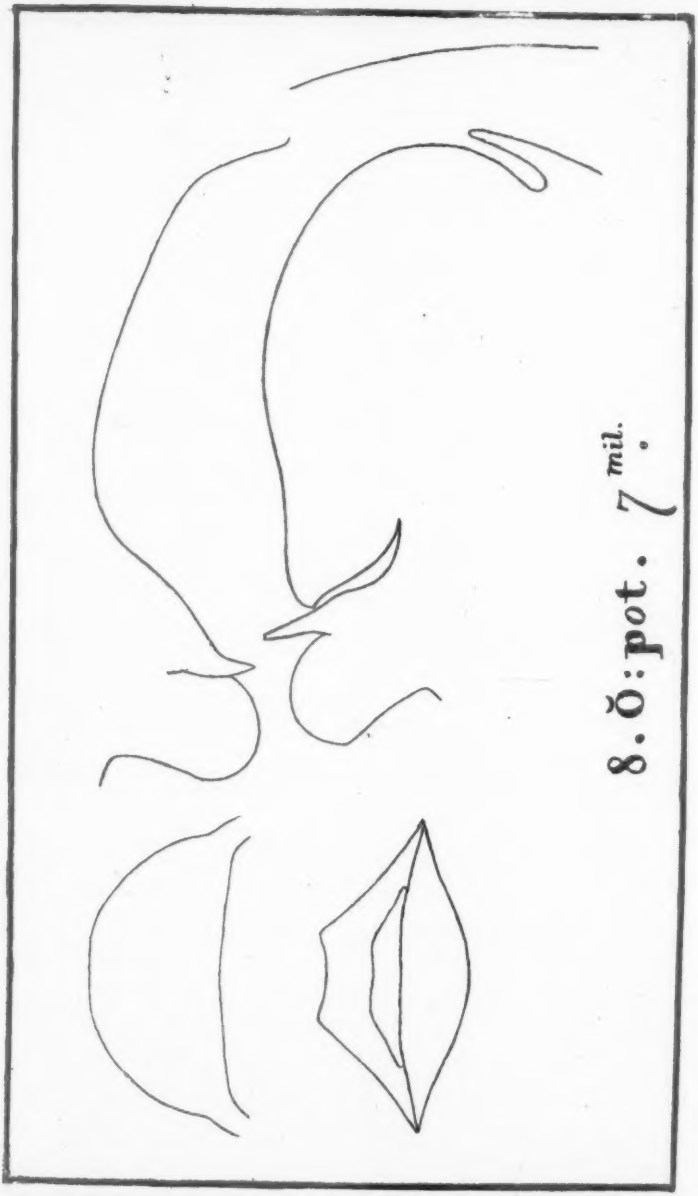
4. Â: bought. 6½ mil.

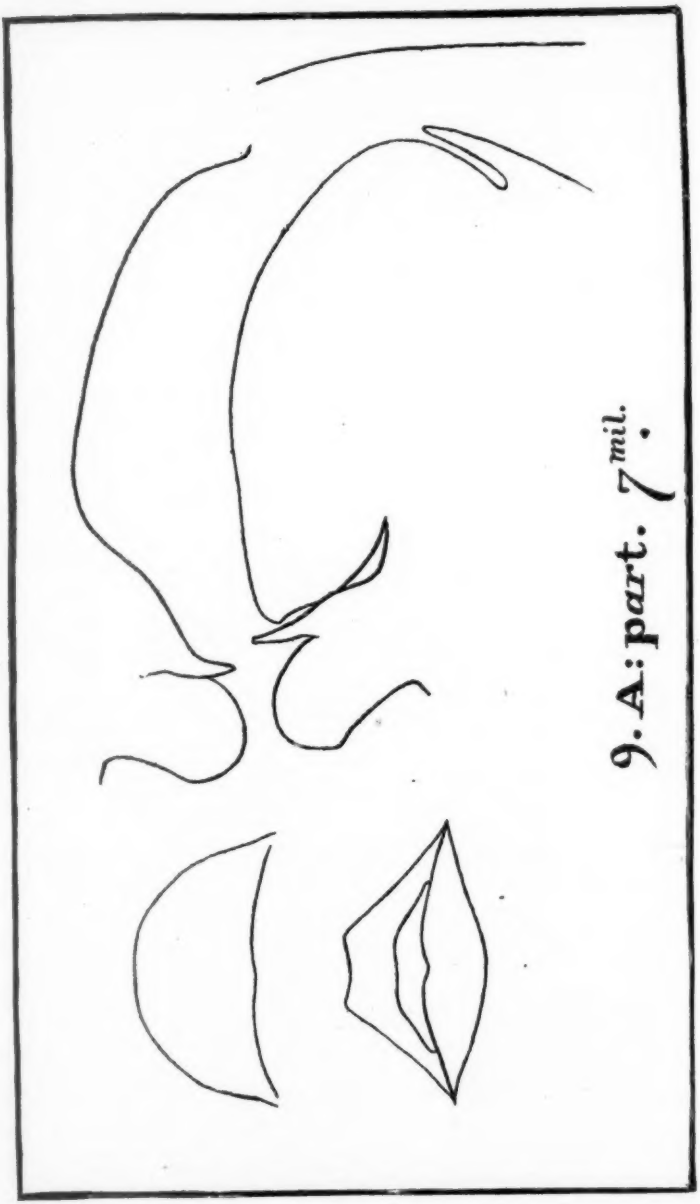

5.0: whole. 4½ mil.

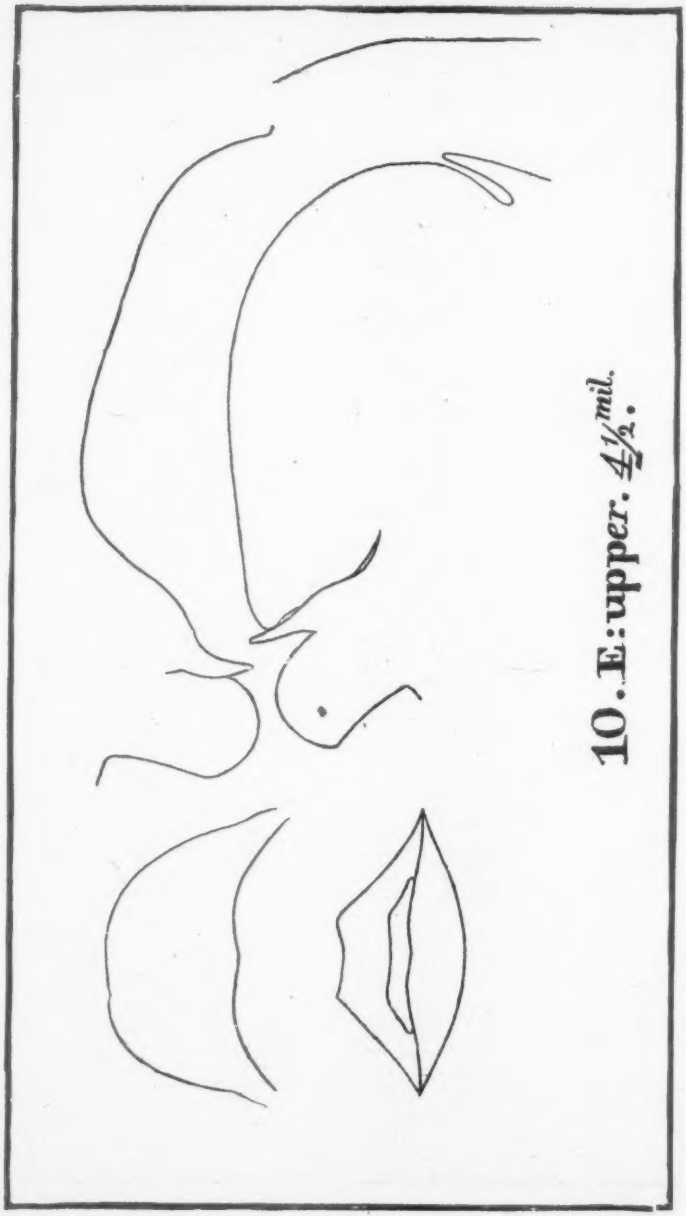


6. U: hull. 6mil.

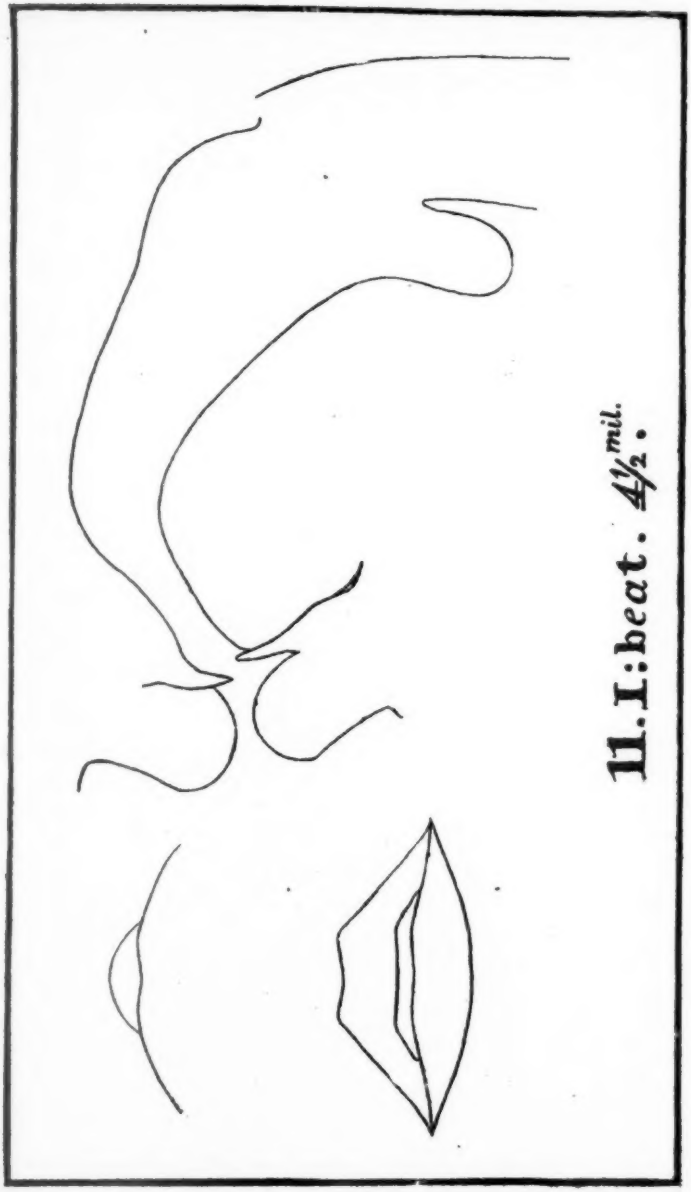

7. Ë: burl. 5 mil.

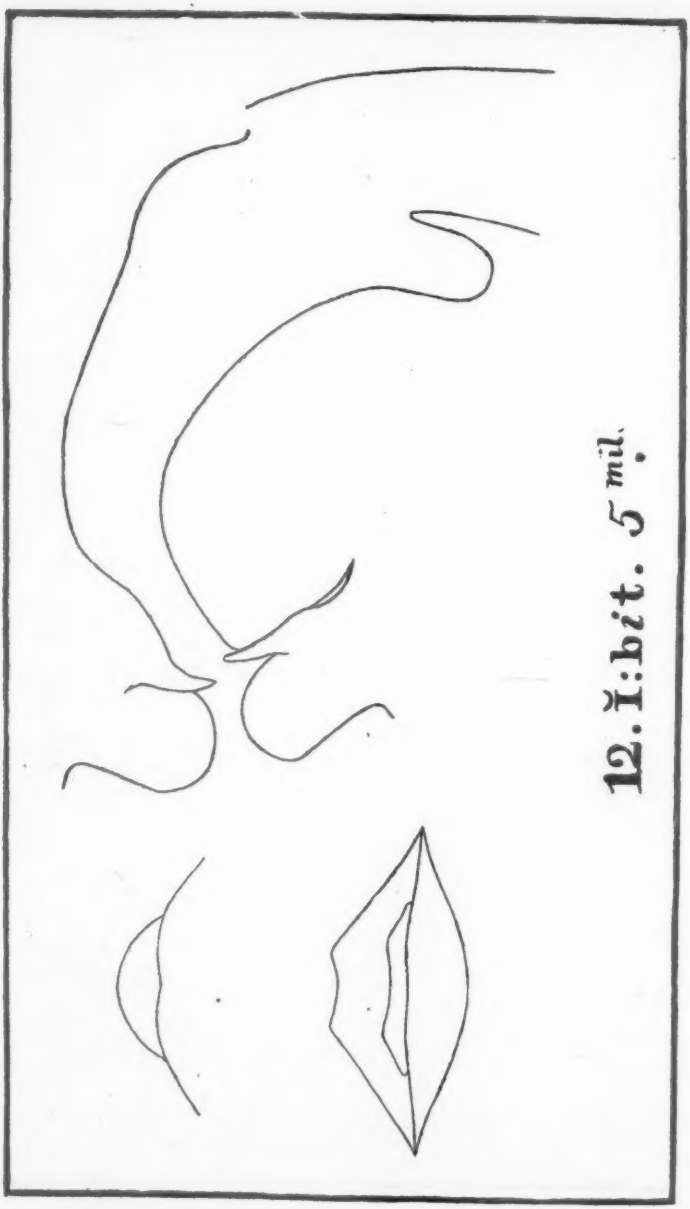

8. ŏ: pot. 7 mil.

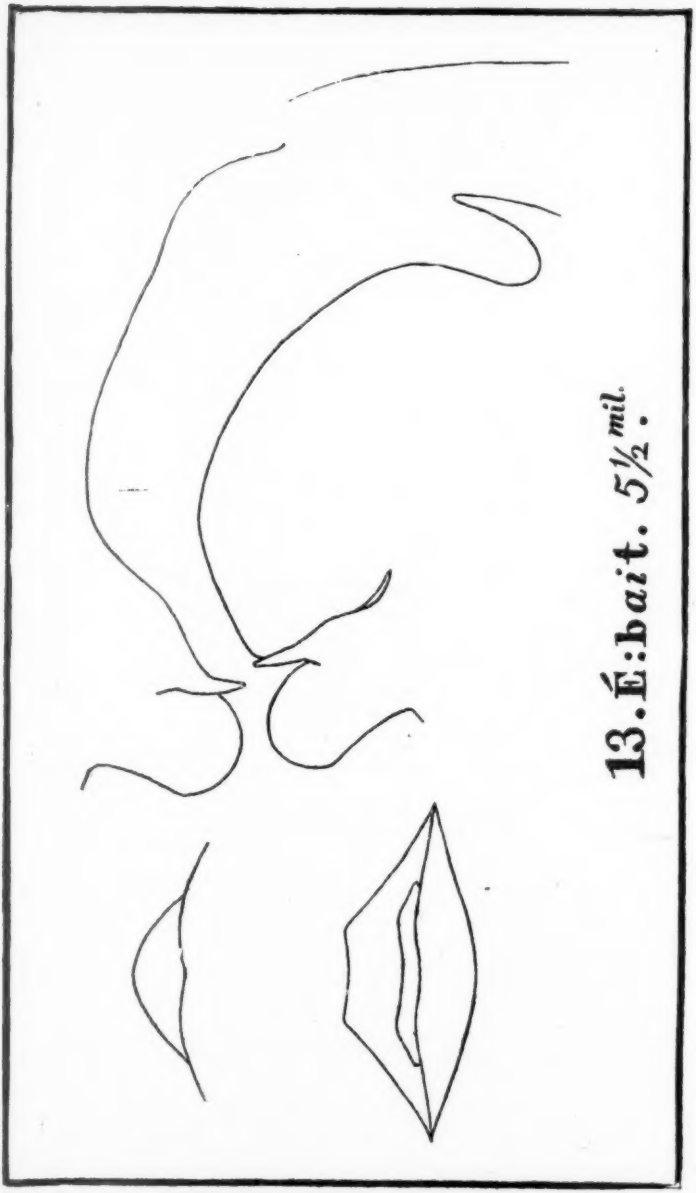

9. A: part. 7 mil.



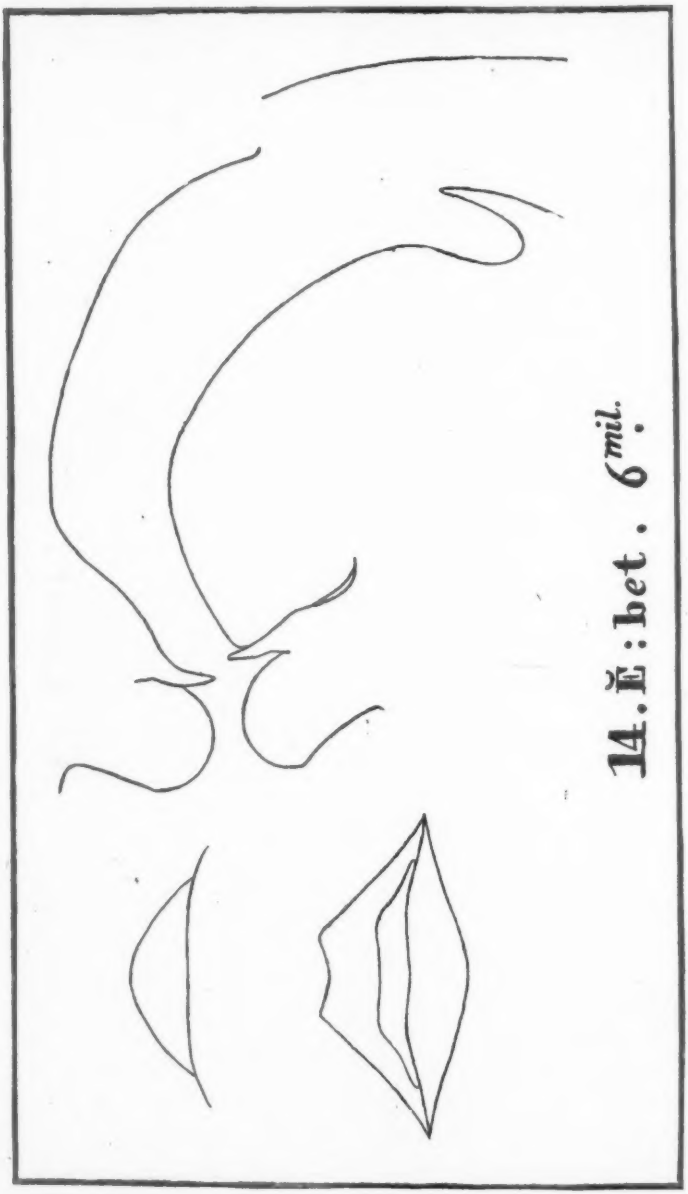
10. E: upper. 4½ mil.

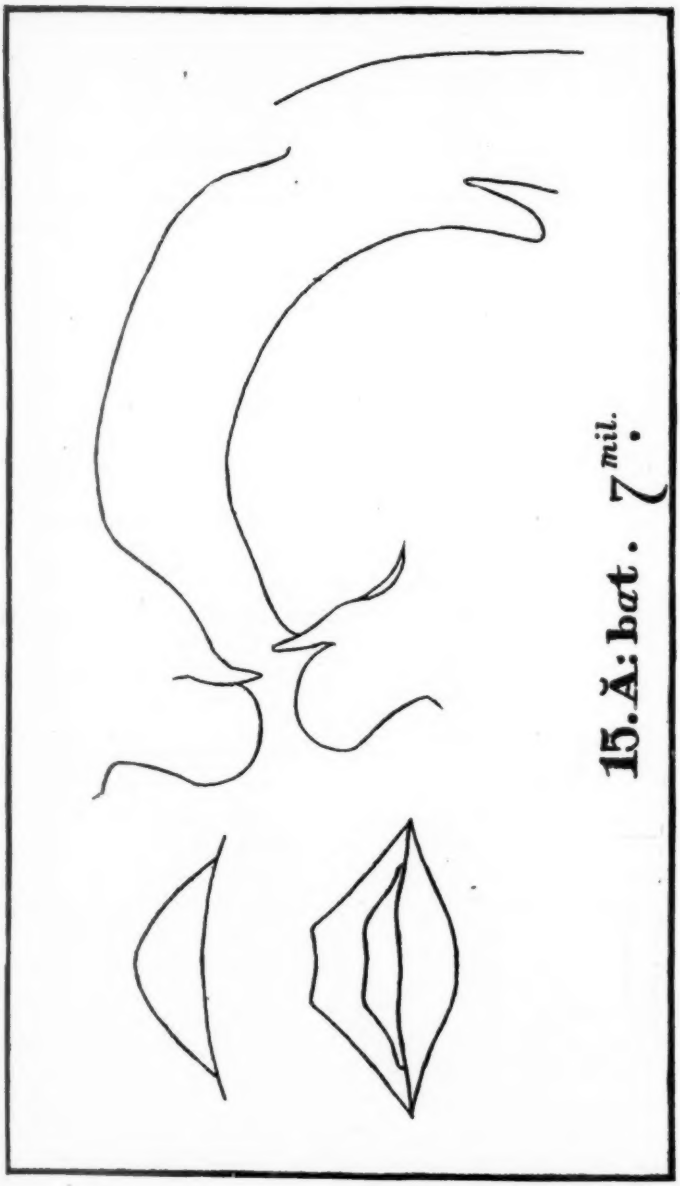

11. I: beat. 4½ mil.


12. ĭ: bĭt. 5 mil.



13. É:bait. 5½ mil.


14. Ĕ : bet . 6mil.



15. Ă: bat. 7 mil.

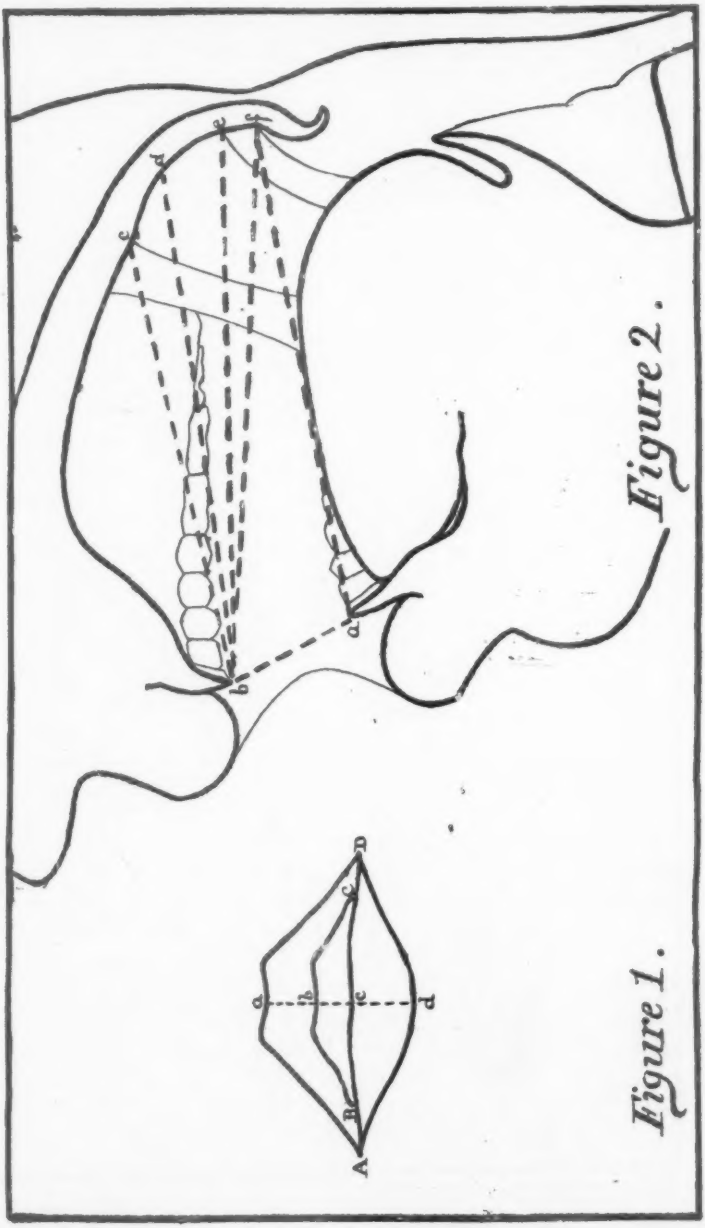


Figure 2.

Figure 1.

VISITORS AND THEIR VIEWS.

What to do with visitors is each year becoming a more and more important question to teachers. They come to us at all times and seasons, and, knowingly or otherwise, are an important factor in our educational problem. They are of various kinds, but classification is difficult by reason of their infinite variety.

Some may plead that our work cannot be fully known or appreciated if the vineyard is not visited. True! but if the number of those coming is so great that the young vines are injured, or the sun and dew kept from the budding branches, then we fancy notices should be posted at the various entrances—"No admittance except on business." Though we would not make "star chambers" of our institutions, yet surely some restrictions might be placed on the inroads of the public.

As it is, we will mention a few of the specimens it has been our lot to meet, and then call upon our fellow-laborers to offer suggestions as to ways of utilizing them.

Perhaps the hardest of all to encounter are the lachrymose. It is considerable of a trial, after weeks spent in endeavoring to impart a spirit of courage to the pupils—showing how grand a thing it is to accomplish with *four* senses a deed for which five are used by others—to hear, in the midst of a recitation before a visitor, a smothered sob, and, turning, find said visitor "dissolved in tears." What answer can be made to the question "Why did she cry?" asked by the children after her departure. If we answer, "Because she felt sorry for you," one-half of the class will show their complete disgust, while the other half will settle back to the level from which we have been trying so hard to lift them. For this class of visitors we have as yet been unable to find the slightest use. Not a single way of utilizing their calls has suggested itself to us.

As an offset to this we can recall just one of an entirely antipodal character, who remarked with a merry laugh: "I hope you'll excuse me, but really it all strikes me as so irresistibly funny. You are not annoyed, are you?" and our reply: "Oh, no; you are only a novelty and quite a refreshing one."

Not any more divergent in their views, however, were they than the two following. The one, a foreigner of Catholic belief, asked, after a long call: "Madam, how long have you been

teaching this way?" "Five years." "Five years!!! Madam, you will go straight up; you will not take one step toward the other place;" and the other who exclaimed: "I should think it must be just like play to you. I would like to try it myself." (We mentally wished she might.)

There are some who come to us apparently imagining that when one word has been spoken by a pupil, all other words will follow without farther help, as though the whole English language had been dammed up, and when once the flood-gates had been opened it would pour forth an unceasing stream. This style of visitors proves the most troublesome to a teacher of beginners in articulation. They are the ones who like best to experiment with the pupils. "Will you allow me to speak to the class?" "Certainly, but please use only baby words, as they do not understand sentences yet;" and then almost invariably the first thing said will be: "What is your name?" or "How long have you been in school?" The explanations given beforehand, and which we fancied had been very lucid, have again to be repeated, only to be met by the remark in rebuttal: "Why, surely you teach them what their names are the first thing." Indeed we do not, especially when the pupil may chance to be a Russian, with all the most exasperating consonants of the alphabet combined in the closest manner in her family patronymic.

This visitor departs leaving a feeling behind that the cause in which we have so firm a belief has been injured in her estimation, and that we have in some way failed in our duty.

Another species is the credulous, believing all that is told them, and occasionally helping statements along by saying, "I suppose you will teach them to sing by and by." What wonder if, some times, thetemptation assails us to reply, "Yes, we expect this one to appear in opera when she is eighteen." The result of an honest teacher's remark, that a certain child has some slight hearing, and that this improves his voice, is not infrequently, "If he hears, he should not be in a school for the deaf;" and the suspicion is immediately engendered that some important fact is being concealed about the other pupils. Patient explanations may be given ninety-nine times out of a hundred, but the hundredth time the teacher is very apt to give none and so be relegated to the ranks of "those who conceal the truth."

Can any co-worker inform us as to just what is meant when

visitors ask an articulation teacher, "Will they ever learn to talk?" It usually comes in answer to the question of the teacher as to whether they understand what the children have said. "Yes," they reply, "but will they ever learn to talk?" It is such a quiet set-back, following, as it almost invariably does, an exhibition of what we have considered a remarkable degree of proficiency. Teachers of the deaf are not the only sufferers from this style of questioning, as is shown by the following little anecdote of an Indian lad:

A certain bright lad in one of the Indian mission schools, while working at his bench, was accosted by a visitor who asked him a number of questions, to which he replied in the best English at his command.

"Do you speak English?" was the last astonishing interrogation.

"No; do you?" was the prompt reply of the dusky carpenter, as he turned again to his bench.

There are also visitors who comprehend too quickly, like one who broke into the middle of an explanation with the remark that she understood the system perfectly; she had spent an hour in the school-room before; and others who never comprehend at all, but finish all their speeches with "Yes, but *how?*"

Others there are who imagine a deaf-mute to be some strange variety of the human race kept on exhibition. Such a couple came to us the other day, who, finding themselves in an articulation class, exclaimed, with a disappointed air, "Why, these are just the same as other children." A great compliment indeed, as far as speech was concerned, but not intentionally given, for they left us almost immediately. Oh! ye Vivians with your waving palms, we might almost envy you your mystical passes as these troublesome friends referred to frequently go away awe-struck by the graceful mystery of your swiftly moving fingers, though the same words in the plain prose of articulation would produce no effect.

Yet not all callers are disturbers of the peace, for many with their fresh thoughts and helpful words have more than compensated for their inroads on our time. The places they came from have proved texts for lessons in geography. Bits of history have been given in connection with the countries in which they have lived or wandered, and they themselves have willingly stood as objects from which instructive lessons could be given. How refreshing such callers are, only a tired teacher can know.

Others again, equally welcome, come to us with the Macedonian cry. To them we give all we have to give and do it gladly, bidding them take cheer, and telling them in all sincerity to come as often as they wish, and they shall ever have of our best.

Teachers of the deaf are neither saints nor Jobs (we have sometimes thought that there are more trying things than boils to endure), and patience is an article which, no matter how largely invested in at the beginning of a term, seems destined to be fully used up before it ends. Still, occasionally the little ones themselves avenge our wrongs, and we can recall an instance or two in which the visitor was more embarrassed than the teacher. Having given repeated lessons to one little boy, that a proper position in sitting was not with one knee crossed over the other, we were quite startled one day to hear him ejaculate during a call, "Put down your foot," and see the visitor quietly lower his foot.

Another time a youthful blonde was present whose upper lip bore only the faintest down. One of the tiniest sprites in the class pointed to this moustache to show that he had perceived it. We quietly shook our head by way of rebuke, but alas! misunderstanding the action, and thinking his statement called in question, he sprang to his feet, and, laying his finger on the gentleman's lip, said, "Sure!" "Sure!" Trained to investigate all strange phenomena, and ask about them, is it any wonder if sometimes the powder on a lady's face calls forth the question, "Flour?" or a suspiciously tinted cheek, "Red, how?" Unfortunately, no matter how often at other times their speeches may be misunderstood, such as these no visitor fails to comprehend. If we seem to deal with the matter in too frivolous a spirit, rest assured it is with the "laughter that is akin to tears."

We have often tried to ascertain what previous conception of our work had been formed in the mind of the caller, but tried in vain. That the conception has been strangely at variance with fact we have not the slightest doubt, and have at least one incident to prove it. A number of months ago our pupils attended a fair in a neighboring city. After a long wandering among the exhibits we left the ranks and sat down in the gallery near some strangers, to rest, just in time to hear the following conversation:

"Do you see that lady down stairs with some of those deaf children?"

"No; where?"

"Why, there; that one dressed in blue, standing by that gentleman."

"Oh, yes; what about her?"

"Well, she is a deaf-mute. I've been watching her for a long time. Oh! look! look!! the *poor* thing is trying to talk. Isn't that PERFECTLY HIDEOUS?"

The joke of the matter is this: The lady referred to is a speaking person with no knowledge of the "articulation method," and was talking to a speaking gentleman and making no facial contortions whatever, yet this learned spectator with her strangely conceived ideas labelled her as a deaf-mute and called "hideous" that which was not evidently considered so by the gentleman listening. Over such reefs as these do we have to guide our barks and try to find safe anchorage and harbor.

Enough has been said. Were there any signs of a diminution in the numbers of our callers, we would patiently await the outcome, but instead of that, as the weeks go by, they seem to be alarmingly on the increase, and so ere we are utterly overwhelmed we send out "a far cry" through our working world: "What can be done with visitors?"

MISS L. MOFFAT,
Instructor in the California Institution,
Berkeley, Cal.

BENSON.

BENSON is a sable youth of some sixteen summers and large of his age. He was not endowed by nature with a high grade of intellect, and his parents have done what they could to still further hamper his acquirement of knowledge by keeping him out of school until this fall. Whatever doubt there may be in other instances as to the propriety of the terms "deaf and dumb," there can be no question as to their perfect fitness in the case of Benson. I do not mean to imply that he is voiceless, for I often have occasion to realize that he is not, but Benson is dumb in the obnoxious sense of the word. I really think he is the dumbest pupil, not to be idiotic, that it has ever been my privilege to meet. I have long sighed for a chance to try my hand at primary work; I've got it now in the most elementary form, and perhaps if I jot down a few of Benson's idiosyncrasies and how I combated them, I may aid some other worker, or provoke indignant, but none the less valuable, criticism from more experienced primary teachers.

I was led to believe by Benson's brother, who brought him to school, that I might expect something rather out of the ordinary in the work of my new pupil. Perhaps he was right. Indeed, I think he was, but hardly in the sense that he intended. I displayed a highly-colored picture of a cat to Benson, and, after giving him a pencil, pointed to his slate and made the sign for "write." He took the pencil with the air of an experienced penman, arranged his left cuff in a preoccupied sort of way, and looked up at me sidewise as if to inquire whether I desired anything further.

I drew his attention to the cat of many colors and pointed to the slate again, whereupon he once more poised the pencil in mid-air, selected a spot with much circumspection, and looked up at me and croaked. It was the croak of interrogation, and I inferred that he desired to be assured positively before proceeding further that I wished him to do so. I signified that I did. He then made a few hieroglyphics, which may have represented "cat" to his mind, but I feel certain that they would not have done so to any other mind.

I now wrote "A cat" at the top of his slate and requested him to copy the words. He went through the same preliminaries mentioned above, and even extended them somewhat,

but eventually got down to work and made some marks that bore some resemblance to those I had made. He smiled complacently when I patted him on the back, and passed it off with an air that implied he was equal to any emergency.

I pointed to the cat and then to its name, and endeavored to make him understand the meaning of the writing. I also taught him to spell the word on his fingers. Everything that he did was performed with a ponderous sort of emphasis that would have made a person unfamiliar with the deaf suppose that he knew all about it. He would arrange his digits in the most remarkable positions, but with an air of positive conviction that he knew what he was doing. I felt that it was necessary to differ with him quite frequently, but I did so in a semi-apologetic way so as not to startle or disturb his serenity. But indeed I must say for Benson that, although he has now been under my instruction for some three weeks, he has always accepted my sharpest criticism with unruffled mien, and however radically he may dissent mentally, he has never permitted the frown of disapproval to mar his placid features, though at times he makes no attempt to disguise the fact that he cannot see the purpose of all my calisthenics.

I soon abandoned dactylology for the time being, and concentrated my every effort to convincing Benson that the written characters on his slate represented the object shown in the picture. I had him copy the names of four animals represented on the first page of the reader; then I tried to get him to indicate which one of the four words belonged to the picture that I pointed out. But he evidently thought I was going too far. He had written the words: what more did I want? However, since I insisted, how would this one do? I pondered the words (A cow), and decided that they did not harmonize with the picture of a dog. Well, then, if that didn't satisfy me, what did I want?

The experiment of calling up another boy more advanced and having him match the word and picture did not seem to cause any discomfiture on Benson's part. He made some explanatory remarks of a character unknown to me, but they seemed to satisfy himself, and it was evidently unwise and useless to pursue this tack any longer.

After repeated experiments with pictures, I became satisfied that the practical mind of Benson demanded something more concrete than a wood-cut, so I got a box, a hat, and a fan, and

wrote the names on the articles themselves. My pupil soon learned to copy any word placed before him, and he wrote a hand that was distinctly visible to the naked eye. But the difficulty was that he was utterly at sea as soon as the name of the object was concealed from him. He would copy the words "A box" several times, in a long column, and I would think "Surely that has left its mark on his brain," but the moment I erased the words from his slate, turned the object over, and implored him to write its name, he would go maundering and wandering off into a string of cabalistics, introducing large invoices from the English alphabet and not a few characters that I never saw elsewhere than on Benson's slate.

I sometimes called his attention to the length of the original word, but the next time the same thing would occur again. Apparently some crook or curve in the letter last made suggested to his mind another twist that he had made or imagined previously some time, and so one word brought on another, until, on my return from an examination of other slates, I would find him organizing the customary procession, which was only limited in length by the width of his slate.

I tried other devices to impress the word on his mind. I put the object at such a distance from him that he could barely discern the form of the letters. Benson explained to me that he could not see very well at that distance, so I told him to leave his seat, walk over and inspect the letters, and then go back and write them. He pointed out to me that it would be much more convenient for him if I would kindly place the object on his desk. I, however, insisted upon my method, so he uncomplainingly obeyed, though no doubt he considered me a very unreasonable individual.

Whether it was the result of this final, supreme effort of mine, or whether it was the result of the whole chain of circumstances, I cannot say, but after three weeks of this sort of work Benson one day electrified me by writing the words "A box," and then pointing to the object at some distance from him. I was beside myself with delight, and Benson was glad in a condescending way to see me pleased, though I more than half suspect that he thought I was making a great ado about nothing.

Benson now expressed a desire to go home. The folks would be cutting sugar-cane, and his services would be needed. Besides, he had now completed his education; he had accomplished that for which I had been striving for three weeks.

He caught my idea, and he would just go home and continue his literary pursuits there. He did not spell this all out, but I gathered from his elaborate signs that this was about his meaning, and I hastened to assure him that he would do better to stay with us a little longer, and perhaps we might be instrumental in aiding him to learn another word. He took the matter under advisement and ultimately agreed to favor us with his presence for a while longer.

Next day Benson aroused my suspicions by writing not only "A box" but several other words, his own full name among the rest, and investigation revealed the fact that he had a list of words on a piece of paper in his desk, and by occasional furtive glances at it he was able to transfer the words to his slate when he thought my attention was attracted elsewhere. I am afraid I was too much delighted to regard Benson's depravity in the proper way, but I took his "pony" away from him, and feigned a severity that I must admit I did not feel in reproving him for his deceit. He was becomingly depressed, and set to work energetically to write the words without any guide except his memory. He did well enough to restore my confidence, and now I have put him to work on sentences. I have adopted as the form best suited for beginners, "The hat is on the desk." As soon as Benson is able to write this form of sentence, I shall begin to write questions on the black-board and require him to write appropriate answers:

Where is the book?

The book is on the chair.

Where is the sponge?

The sponge is on the box.

I shall follow this up with a change in the preposition, using *in* and *under*. All this is of course subject to the approval and co-operation of Benson, and the forecast is strongly suggestive of the feat of counting chickens before they are hatched. So I will not attempt to calculate just what the next step is to be. Possibly I may have occasion to revise what I have already planned. Possibly my expedients with Benson may cause a smile of derision on the faces of some veterans in primary work; if so, have the goodness to make the smile audible, as Artemus Ward might say, and give me a chance to do better with my next victim.

WM. A. CALDWELL, M. A.,
Principal of the Florida Institution, St. Augustine, Fla.

DEDICATORY HYMN.*

Eternal Father, Source of power,
  Of knowledge, light, and love;
In our new home, this gladsome hour,
  We lift our hearts above.

The hope of many years, to-day,
  Is with fruition crowned;
The seed, long nurtured by the way,
  Its fruitage-hour has found.

A score of years has o'er us sped,
  And onward still we tend;
Thanks for the friends whose love has led,
  Whose wealth and wisdom blend.

Thanks for the strong, yet tender hand,
  The brain of ceaseless skill—
That from the first our growing band
  Has led—is leading still.

Thanks to the workers, true and tried,
  Who bravely onward press,
Unmoved by broken ranks beside,
  And anxious but to bless.

In Paradise a noble band
  Of taught and teachers throng,
And answer, from that glorious land,
  Our glad and grateful song.

From earth and Heaven our roll we call,
  North, South, our numbers spread;
Present and absent, Lord, on all
  Thy benediction shed.

The knowledge, wisdom, power, and skill,
  A score of years has taught,
Do thou increase, that forward still
  May press our work and thought.

Let body, mind, and spirit wake
  To life more full and free;
These living temples help us make
  Far worthier shrines for Thee.

Here give each spirit upward wing;
  Eternal Father—here
To Heaven's completer knowledge bring
  Unnumbered minds more near.

MISS ALICE C. JENNINGS,
Boston, Mass.

* Written for the Dedicatory Exercises at the Horace Mann School-House, Boston, Mass., November 10, 1890.

NOTICES OF PUBLICATIONS.

SVENDSEN, CONRAD. Praktisk Veiledning til at Rette Talefeil. Bygget paa en fysiologisk-fonetisk fremstilling af talen. [Practical Guide for Correcting Errors in Speech, based on physiological and phonetic principles.] Kristiania: Alb. Cammermeyer. 1890. 8vo, pp. 71.

This little book, as its name implies, is intended as a guide and reference book for teachers of articulation. Mr. Svendsen is an instructor in Mrs. Rosing's Oral School in Christiania, and the book is a *résumé* of a series of lectures given by him to a circle of teachers, and published at their request. An idea of its scope is best obtained from the table of contents, which is as follows: The breathing organs; the throat and mouth; the voice; talking through the nose; number of sounds and their principal groups; the vowels; the simple vowels; diphthongs; consonants; combinations of consonants; combinations of consonants and vowels; the use of the breath in continuous speech; regulation of the voice; stammering.

A description is first given of the organs employed in the production of sound and their mechanical working in articulation; the various sounds which these organs are capable of producing are then analyzed and classified; and finally each sound is treated separately and directions given how to teach it. Some of the difficulties commonly met with are also described, together with their causes and remedies. Some interesting practical helps are suggested. For example, to teach the sound *k*, if the usual way of developing it from *t* should not succeed, the child is made to lean backward and a little water is poured into its mouth with the admonition not to swallow it. The vocal organs will then necessarily assume the position for *k*, and with a few repetitions the child will learn to make the position without the water.

The book is adapted to the Scandinavian tongues and will no doubt be useful as a reference-book to teachers of other countries who can understand it. Most of what it contains may, however, be found already in our language, though not, perhaps, in so convenient form. The author acknowledges his indebtedness to the following works: G. Von Meyer, "Unsere Sprachwerkzeuge;" Fournié, "Physiologie de la Voix;" T. Arnold, "Education of Deaf-Mutes;" H. Sweet, "Handbook of Phonetics;" Joh. Storm, "English Philology;" K. Brekke, "Bidrag til dansk-norskens lydlære;" E. Sievers, "Grundzüge der Phonetik."

Om Dovstummes Undervisning. Reiseberetning. [Concerning the Education of Deaf-Mutes. Report of a Journey.] Kristiania: Folkets Avis Bogtrykkeri. 1889. 8vo, pp. 25.

In 1888, with the aid of public funds, Mr. Svendsen made a trip for the purpose of studying the schools in other countries. His observations are gathered from the following schools: Milan Provincial, Mr. Hugentobler's at Lyons, Paris National Institution, the schools in Schleswig, Frankfort-on-the-Main, Cologne, Riehen near Basle, Fredricia, and Copenhagen.

He divides his observations under four heads: 1. The fundamental principles for the classification of pupils. 2. Classification in certain schools. 3. Methods of instruction. 4. Reception of pupils of low intelligence where compulsory education does not exist.

As to the first, after considering the various elements which enter into the consideration of the subject, such as difference in mental capacity, age when deafness occurred, partial hearing, ability to speak, etc., he says that if all were to be instructed in the same classes it would necessarily be at the expense of the most intelligent, because the instruction must be arranged to suit the slowest. It will not do here, as in ordinary schools for the hearing, to suit the instruction to those of average intelligence and let the least intelligent get what they can; for, while the hearing child is to gather more or less knowledge, the deaf child is to penetrate into an unknown language by a succession of steps, the failure to master any one of which might be fatal to further progress.

The desirability of classification is also generally admitted. There are two methods of classification: the French, based on age when deafness occurred and present degree of hearing; and that of the Schleswig school, based on the intellectual capacities of the children. The former and older is the division into semi-mutes and deaf-mutes, and was used and defended as long as the combined system prevailed. But when oral instruction was adopted for all it was soon discovered that a different mode of division must be adopted; for it was found at once, 1882 (in France), that "the children who profited most by oral instruction were not those who had heard and spoken in their earliest childhood." (Houdin, *Rapport Stat.*, p. 8, Bordeaux.) Henceforth those children were gathered together in a class who were found to be best capable of keeping together without regard to what rendered them thus capable. This is the so-called Schleswig method, based on intellectual capacity.

Classification.—The Schleswig Institution receives all children from Schleswig-Holstein, where compulsory education has existed since 1805. In order to facilitate classification new pupils are received only every other year, when about forty pupils are admitted at a time. These are divided into four parallel classes according to intelligence and designated A, B, C, and D. Class D consists of weak-minded children and those of the lowest intelligence. Since 1875 less than one per cent. have been sent home as incapable of being instructed. Two years of trial are given, after which the final classification is made; the four classes are then reduced to three, and designated as A, B, and C. The C class consists of the former D class and the poorest of the C class, and, as some of the children are of extremely low intelligence, it is taught in two divisions.

A similar classification is made in the Paris Institution, which annually receives about thirty boys between the ages of nine and twelve. If older than twelve they "must show evidence of having received instruction previously." During the first month they are examined by a commission consisting of the director (who is not a practical instructor), the censor (who is the head of the educational department), a physician, and a teacher of the school. Those that are found incapable of profiting by the course of instruction are sent home. They are in general cretins and idiots, and their number does not exceed three or four per cent. The others are divided into three or four parallel classes, as in Schleswig.

In Cologne about three or four per cent. are sent home as unsuitable for instruction.

Methods of Instruction.—It must be understood that Mr. Svendsen's mission on this subject was chiefly to ascertain whether the least intelligent pupils, those classed C and D, should be taught orally or otherwise, as it is pretty generally accepted in his country that the A and B pupils should be so taught.

The evolution of deaf-mute instruction in France is briefly described: the rise and progress of the sign system, its replacement by the spelling-writing method, and the gradual yielding of the latter to the pure oral method, which completely triumphed after the Milan congress.

In reply to questions as to the best method for instructing the C and D pupils, Mr. A. Dubranle, head instructor in the

Paris Institution, writes that when cretins and idiots, constituting about three or four per cent., are left out, all others have the physical and intellectual qualifications necessary for instruction by the oral method, which, moreover, is the best method for backward pupils. Only with the latter more use is made of writing, without relinquishing speech and lip-reading. All the teachers in the Institution concurred in this view except one, who preferred a combination of all known methods —speech, signs, spelling, and writing—for backward pupils.

Mr. Hugentobler, of Lyons, expresses a similar opinion to Mr. Dubranle's, adding that the oral method gives results, even with the dullest pupils, superior to those of the old spelling-writing method.

The late Abbé Tarra, of Milan, said: "I must admit that the results of the spelling-writing method, however 'pure,' did not come up to what we might expect after our labor. Moreover, little by little we found on trial that all deaf-mutes who are on the whole capable of receiving instruction can learn to speak and to read the lips of others." All the teachers in this Institution agreed that the oral method could and should be used for all children not cretins.

In the Schleswig Institution the lowest four parallel classes, A, B, C, and D, had been in school nine months. In that time the D class, the lowest in intelligence, had learned to speak, lip-read, and understand the meaning of about 300 words, and Mr. Svendsen satisfied himself by actual tests that such was the case. The C class had learned about 400 words and a few sentences. The lip-reading in the latter class was very good; their speech satisfactory.

The director of the Cologne Institution, Mr. Weissweiler, expressed himself thus: "It is not the case that the least intelligent find it difficult to learn to speak; they can often speak better than the more intelligent, but, of course, they retain less of what they learn than the others." Concerning speech-reading, he said: "The less intelligent can often lip-read splendidly, and always sufficiently well." He added: "When my pupils, after six or seven years absence, come to visit me, I am surprised at the progress they have made in language." When asked if even the less intelligent progressed, he replied, "Yes, without doubt; yet not so much as those of greater intelligence, but proportionally as much."

Pupils of low intelligence.—Outside of Scandinavia and

Denmark, compulsory education does not exist except in a few German provinces. But Mr. Svendsen finds that it is an error to suppose that only the bright pupils are received in the various schools. On the contrary, the proportion of pupils of low intelligence is as great in countries where compulsory education does not exist as where it does.

Mr. Svendsen comes to the following conclusions:

1. That all children can and should be instructed orally.

2. That the results by the oral method are better for all the children, even the least intelligent, than by the spelling-writing method.

3. That a division of the pupils is necessary for successful instruction.

4. That division according to intelligence is preferable where the oral method is used as the main method of instruction.

5. That a division into deaf-mutes and semi-mutes should be used only when the former are still instructed by the spelling-writing method.

In the above notice I have endeavored to give the principal arguments in the pamphlet so as to convey the impression intended by the author rather than to criticize them. The readers of the *Annals* can form their own judgment as to their weight. Mr. Svendsen is not, and does not pretend to be, impartial, or to look at the question from both sides. As one convinced of the superiority of the oral method he starts out rather to gather arguments for his side than to examine the field in a critical way. It is, therefore, not surprising that he finds nothing to criticize in the oral schools, while in the single non-oral school which he visited he finds nothing to commend. In the Royal Institution at Copenhagen he was present at a recitation of an eight-years class of grade A (the most intelligent), in which the questions and answers were given by finger-spelling, and he says that every question had to be repeated from two to four times, and that he never in an oral class saw so many repetitions and corrections.

OLOF HANSON, M. A.,
Philadelphia, Pa.

TABULAR STATEMENT OF AMERICAN SCHOOLS FOR THE DEAF, 1890.

A.—PUBLIC SCHOOLS IN THE UNITED STATES.

	Name.	Location.	Date of opening.	Chief Executive Officer.
1	American Asylum for the Education and Instruction of the Deaf and Dumb	Hartford, Conn	1817	Job Williams, L. H. D., Principal.
2	New York Institution for the Instruction of the Deaf and Dumb	Washington Heights, New York, N. Y	1818	Isaac Lewis Peet, LL. D., Principal; Chauncey N. Brainerd, Superintend't.
3	Pennsylvania Institution for the Deaf and Dumb	Philadelphia, (*a*) Pa	1820	A. L. E. Crouter, M. A., Principal.
4	Kentucky Institute for Deaf-Mutes	Danville, Ky	1823	W. K. Argo, M. A., Superintendent.
5	Ohio Institution for the Education of the Deaf and Dumb	Columbus, Ohio	1829	James W. Knott, M. S., do.
6	Virginia Institution for the Education of the Deaf and Dumb and of the Blind	Staunton, Va	1839	Thomas S. Doyle, Principal.
7	Indiana Institution for the Education of the Deaf and Dumb	Indianapolis, Ind	1844	Richard O. Johnson, Superintendent.
8	Tennessee Deaf and Dumb School	Knoxville, Tenn	1845	Thomas L. Moses, Principal.
9	North Carolina Institution for the Deaf and Dumb and the Blind	Raleigh, N. C	1845	W. J. Young, M. A., do.
10	Illinois Institution for the Education of the Deaf and Dumb	Jacksonville, Ill	1846	Philip G. Gillett, M. A., LL. D., Supt.
11	Georgia Institution for the Education of the Deaf and Dumb	Cave Spring, Ga	1846	W. O. Connor, Principal.
12	South Carolina Inst'n for the Education of the Deaf and Dumb and the Blind	Cedar Spring, S. C	1849	Newton F. Walker, Superintendent.
13	Missouri School for the Deaf and Dumb	Fulton, Mo	1851	Jas. N. Tate, M. A., do.
14	Louisiana Institution for the Deaf and Dumb	Baton Rouge, La	1852	John Jastremski, M. D., do.
15	Wisconsin School for the Deaf	Delavan, Wis	1852	John W. Swiler, M. A., do.
16	Michigan School for the Deaf	Flint, Mich	1854	M. T. Gass, M. A., do.
17	Mississippi Institution for the Education of the Deaf and Dumb	Jackson, Miss	1854	J. R. Dobyns, M. A., do.
18	Iowa Institution for the Education of the Deaf and Dumb	Council Bluffs, Iowa	1856	Henry W. Rothert, Superintendent; G. L. Wyckoff, Principal.
19	Texas Deaf and Dumb Asylum	Austin, Texas	1857	W. A. Kendall, Superintendent.
20	Columbia Institution for the Deaf and Dumb	Kendall Green, near Washington, D. C	1857	E. M. Gallaudet, Ph. D., LL. D., Pres't.
	A. Kendall School for the Deaf	do	1857	James Denison, M. A., Principal.
	B. National Deaf-Mute College	do	1864	E. M. Gallaudet, Ph. D., LL. D., Pres't.
21	Alabama Institute for the Deaf	Talladega, Ala	1860	Joseph H. Johnson, M. D., Principal.
22	California Institution for the Education of the Deaf and Dumb and the Blind	Berkeley, Cal	1860	Warring Wilkinson, L. H. D., do.
23	Kansas Institution for the Education of the Deaf and Dumb	Olathe, Kansas	1861	S. T. Walker, M. A., Superintendent.
24	Le Couteulx St. Mary's Inst'n for the Improved Instruction of Deaf-Mutes	Buffalo, (*b*) N. Y	1861	Sister Mary Anne Burke, Principal.
25	Minnesota School for the Deaf	Faribault, Minn	1863	Jonathan L. Noyes, L. H. D., Sup't.
26	Institution for the Improved Instruction of Deaf-Mutes	New York, (*c*) N. Y	1867	D. Greenberger, Principal.
27	Clarke Institution for Deaf-Mutes	Northampton, Mass	1867	Miss Caroline A. Yale, Principal.

28	Arkansas Deaf-Mute Institute	Little Rock, Ark	1867	Francis D. Clarke, M. A., Principal.
29	Maryland School for the Deaf and Dumb	Frederick, Md	1868	Chas. W. Ely, M. A., Principal.
30	Nebraska Institute for the Deaf and Dumb	Omaha, Neb	1869	John A. Gillespie, M. A., Principal.
31	Horace Mann School for the Deaf	Boston, (d) Mass	1869	Miss Sarah Fuller, do.
32	St. Joseph's Institute for the Improved Instruction of Deaf-Mutes	Fordham, N. Y., (e)	1869	Madam Ernestine Nardin, President.
33	West Virginia School for the Deaf and the Blind	Romney, W. Va	1870	C. H. Hill, Principal.
34	Oregon School for the Deaf	Salem, Oregon	1870	Rev. P. S. Knight, Ph. D., Sup't.
35	Maryland School for Colored Blind and Deaf-Mutes	Baltimore, (f) Md	1872	F. D. Morrison, M. A., do.
36	Colorado School for the Deaf and the Blind	Colorado Springs, Colo	1874	John E. Ray, M. A., do.
37	Chicago Deaf-Mute Day-Schools	Chicago, Ill., (g)	1875	P. A. Emery, M. A., Principal.
38	Central New York Institution for Deaf-Mutes	Rome, N. Y	1875	Edward B. Nelson, B. A., Principal.
39	Cincinnati Public School for the Deaf	Cincinnati, (h) Ohio	1875	Miss Caroline Fesenbeck, Principal.
40	Western Pennsylvania Institution for the Instruction of the Deaf and Dumb	Edgewood, near Wilkinsburg, Pa	1876	William N. Burt, M. A., Principal.
41	Western New York Institution for Deaf-Mutes	Rochester, N. Y	1876	Z. F. Westervelt, Principal and Sup't.
42	Portland School for the Deaf	Portland, Me	1876	Miss Ellen L. Barton, Principal.
43	Rhode Island School for the Deaf	Providence, (i) R. I	1877	Miss Laura DeL. Richards, Principal.
44	St. Louis Day-School for the Deaf	St. Louis, (k) Mo	1878	Jas. H. Cloud, M. A., do.
45	New England Industrial School for Deaf-Mutes	Beverly, Mass	1879	Miss Nellie H. Swett, do.
46	Dakota School for Deaf-Mutes	Sioux Falls, South Dak	1880	James Simpson, Superintendent.
47	Milwaukee Day-School for the Deaf	Milwaukee, (l) Wis	1883	Paul Binner, Principal.
48	Pennsylvania Oral School for the Deaf	Scranton, Pa	1883	Miss Emma Garrett, Principal.
49	New Jersey School for Deaf-Mutes	Chambersburg, near Trenton, N. J	1883	Weston Jenkins, M. A., Superintendent.
50	Deaf Mute Department, University of Deseret	Salt Lake City, Utah	1884	Frank W. Metcalf, Principal.
51	Northern New York Institution for Deaf-Mutes	Malone, N. Y	1884	Henry C. Rider, Superintendent.
52	Florida Institute for the Blind and the Deaf and Dumb	St. Augustine, Fla	1885	W. A. Caldwell, M. A., Principal.
53	New Mexico School for the Deaf and Dumb	Santa Fé, N. M	1885	Lars M. Larson, B. A., Superintendent.
54	Washington School for Defective Youth	Vancouver, Wash	1886	James Watson, Director.
55	New Orleans Public School for Deaf-Mutes	New Orleans, (m) La	1886	R. B. Lawrence, Principal.
56	Evansville School for the Deaf	Evansville, Ind	1886	Chas. Kerney, B. A., Principal.
57	Cincinnati Oral School for the Deaf	Cincinnati, Ohio, (n)	1886	Miss V. A. Osborne, Principal.
58	La Crosse Oral School for the Deaf	La Crosse, Wis	1886	Miss Viola Taylor, Principal.
59	Deaf, Dumb, and Blind Institution for Colored Youths	Austin, Tex	1887	W. H. Holland, Superintendent.
60	School for the Deaf of North Dakota	Devil's Lake, No. Dak	1890	A. R. Spear, Principal.
61	Toledo Deaf-Mute School	Toledo, Ohio	1890	Alfred F. Wood, Principal.
62	Wausau Day-School for the Deaf	Wausau, Wis	1890	Miss Edith E. Brown, Teacher.
63	Public Schools, including the National College.			
14	Denominational and Private Schools. (o)			
77	Schools in the United States.			

(a) Broad and Pine, and (Oral Branch) Eleventh and Clinton streets. (b) No. 125 Edward street. (c) Lexington Ave., bet. 67th and 68th streets.
(d) No. 178 Newbury street. (e) This Institution has three branches; one situated at Fordham, another at Brooklyn (113 Buffalo ave.), and another at Throgg's Neck, Westchester co., N. Y. (f) No. 649 W. Saratoga street. (g) There are five schools in different parts of the city. Mr. Emery's address is 43 So. May street. (h) Ninth street, bet. Walnut and Main. (i) Cor. Fountain and Beverly streets. (k) Cor. 9th and Wash streets.
(l) 7th street, bet. Prairie and Chestnut streets. (m) 303 Chartres street. (n) Cor. Ninth and Race streets. (o) See page 60.

1,245
1,116
6,129

41 Conts - out of 65
6,129 pupils out of 7245

TABULAR STATEMENT OF AMERICAN SCHOOLS FOR THE DEAF, 1890—Continued.

PUBLIC SCHOOLS IN THE UNITED STATES—Continued.

	Name.	Method of Instruction.*	School-hours.	Industries Taught.§	NO. OF PUPILS. DURING THE YEAR.** Total.	Male.	Female.	No. taught articulation.	Present Dec. 1, 1890.	Total have received instr'n	NO. OF INSTRUCTORS.† Whole No.	Male.	Female.	Deaf-mutes.‡	Semi-mutes	Articulat'n
1	American Asylum	Combined, A.	9 to 12 and 2 to 4	Cab., Sh., Ta.	154	90	64	94	133	2,459	15	7	8	2	1	3
2	New York Institution	do. E. F.	8 to 12 and 1 to 5 (*b*)	Art, Bak., Cab., Car., Ch., Dr., Ga., Gl., Pa., Pr., Sh., Ta., Wc.	350	234	116	350	303	3,254	15	7	8	3	3	8
3	Pennsylvania	do. B. C.	8 to 1 and 2 to 4½	Car., Ck., Dr., Gl., Kn., Pr., Sh., Ta.	494	278	216	118	434	2,394	37	9	28	1	3	13
4	Kentucky Institute	do. A. B.	7¾ to 12½	Car., Ga., Pr., Sc., Sh.	218	127	91	23	172	998	14	8	6	3	3	1
5	Ohio Institution	do. A.	8 to 10¼, 10⅛ to 12½, 2 to 4½. (*c*)	Bo., Car., Pr., Sh., Ta.	471	244	227	122	376	2,414	25	11	14	3	7	2
6	Virginia	do. B.	8½ to 1½	Car., Pr., Sh., Ta	113	58	55	25	88	647	11	8	3	3	2	1
7	Indiana	do. A. F.	8 to 1 and 2 to 4½	Bak., Cab., Fa., Fl., Pr., Sh.	355	192	163	84	298	1,800	17	9	8	3	6	1
8	Tennessee School	do. B.	8½ to 11½ and 1 to 3½	Pr., Sh.	191	108	83	20	154	.....	9	5	4	3	0	1
9	North Carolina Institution	do. B.	8 to 2	Sc., Sh	132	64	68	14	118	.....	8	6	2	4	0	1
10	Illinois	do. A. B. F.	8 to 11 and 12, 1 to 3 and 4½	Bak., Cab., Car., Cl., Dr., Ga., Gl., Pa., Pr., Sh., Wt.	572	332	240	225	507	2,265	34	13	21	6	2	6
11	Georgia	do (*a*). Manual	8 to 1	Gar., Sh.	103	64	39	3	58	380	7	5	2	0	3	0
12	South Carolina	do. Combined, B.	8 to 1	Pa., Pr., Sc., Sh.	81	41	40	20	68	257	7	3	4	2	1	2
13	Missouri School	do. A. B.	7¾ to 10⅝, 10⅜ to 12⅝, and 2 to 4⅜ (*b*)	Ba., Cab., Car., Dr., Ga., Pr., Sc., Sh., Wt.	327	204	123	83	265	1,143	18	7	11	0	5	2
14	Louisiana	do. G.	8¼ to 12¼, 1⅜ to 2⅜	Pr	79	40	39	14	61	.....	5	2	3	1	2	1
15	Wisconsin School	do. A. B.	8 to 12 and 1 to 4½	Bak., Cab., Dr., Pr., Sh.	223	145	78	43	185	868	15	6	9	1	2	3
16	Michigan	do. A. B.	8½ to 11½ and 1 to 4 (*b*)	Cab., Car., Dr., Pr., Sc., Sh.	338	176	162	50	294	1,083	18	6	12	2	2	1
17	Mississippi Institution	do. A. F.	8½ to 1	Car., Pr	99	52	47	16	74	.....	8	6	2	2	2	1
18	Iowa	do. G.	8 to 11¾ and 1 to 3	Bak., Br., Car., Dr., Pr., Sh., Ta	309	199	110	25	270	.....	18	8	10	3	3	2
19	Texas Asylum	do. A.	8 to 12½ and 1½ to 5½	Bo., Car., Pr., Sh.	212	130	82	49	180	460	13	7	6	2	1	1
20	Columbia Institution															
	A. Kendall School	do. A. E. F.	8¼ to 12¼ and 2 to 3	Cab., Pr.	58	42	16	34	40	340	6	4	2	3	1	1
	B. National College	Manual	8 to 12¾ and 1⅜ to 3½	None	71	59	12	0	54	355	9	9	0	0	2	0
21	Alabama Institute	Combined, B.	8 to 1	Bl., Cab., Pr., Sh.	104	53	51	24	83	.....	8	4	4	2	0	2
22	California Institution	Combined, A. B.	8 to 1	Pr., Wood-working	158	95	63	68	145	390	11	8	3	3	...	2
23	Kansas	do. A. F.	7¾ to 10¾, 10⅝ to 12⅝ and 2 to 4½ (*d*)	Ba., Cab., Car., Ga., Gl., Pr., Sc., Sh., Wc., Wt.	264	150	114	40	232	630	18	7	11	4	2	1
24	Le Couteulx St. Mary's Inst.	do. E. F.	8 to 12 and 1 to 5	Ck., Dr., Pr., Sh., Ta.	158	85	73	145	133	495	12	0	12	1	0	10
25	Minnesota School	do. A. B. F.	8½ to 11¾ and 1 to 3½	Cab., Car., Dr., Pr., Sh., Ta.	231	131	100	65	200	516	11	6	5	0	3	2
26	N. Y. Institut'n for Imp'v'd Ins'n	Oral	9 to 12 and 1¾ to 3½	Use of tools	214	114	100	214	191	515	20	9	11	0	0	20
27	Clarke Institution	do.	9 to 12 and 2 to 4	Cab., Sc., Wc.	121	61	60	121	107	330	14	0	14	0	1	14

28	Arkansas Institute	Comb.,	A. B. F.	8 to 12 and 1 to 5	Bak., Ck., Cl., Dr., Fa., Ga., Kn., Pa., Ph., Pr., Se., Sh., Wc.	140	69	71	28	115	358	9	3	6	2	3	1
29	Maryland School	do.	A. B.	7½ to 9¾, 10 to 12¼, and 13¼ to 4½	Cab., Pr., Sh.	106	52	54	54	100	365	10	3	7	3	0	2
30	Nebraska Institute	do.	B. F.	7½ to 1	Car., Pr.	142	79	63	47	117	328	10	5	5	1	1	4
31	Horace Mann School	Oral		9 to 2	Art, Cl., Se., and use of tools	97	41	56	97	88	308	10	0	10	0	0	10
32	St. Joseph's Institute	do.		9 to 3½	Ba., Car., Ck., Dr., Pr., Sh., Se., Ta.	311	139	172	311	285	335	21	1	20	0	0	20
33	West Virginia School	Combined,	A.	8 to 1	Cab., Car., Pr., Sh., Ta.	88	46	42	48	76	289	6	4	2	1	2	1
34	Oregon School	Combined,	A.	8½ to 3½	Br., Pr.	30	16	14	10	25	110	4	3	1	2	0	1
35	Md. School for Colored	Manual		8 to 12 and 1½ to 2½	Ch., Sh.	22	16	6	0	18	65	6	5	1	2	0	0
36	Colorado School	Comb.,	A. B. F.	8 to 1	Car., Ma., Pr.	83	44	39	30	72	175	8	5	3	0	3	2
37	Chicago Day-Schools	Combined,	A.	9 to 2½	Bl., Car., Mo., Mw., Pn., To.	35	17	18	12	35	200	6	2	4	1	2	1
38	Central N. Y. Institution	do.	A. E.	9 to 12 and 1½ to 3½	Car., Dr., Gl., Pr., Se., Sh., We.	156	93	63	156	126	334	10	8	2	2	4	4
39	Cincinnati Public School	Manual		8½ to 12, 1¼ to 3¼	None	13	7	6	0	11	108	1	0	1	1	0	0
40	Western Penna. Institution	Combined,	A.	8 and 11 to 1 and 2 to 5	Cab., Car., Dr., Sh., Wc.	194	110	84	30	172	385	12	5	7	0	3	1
41	Western New York Institution	do.	D.	8½ to 10½, 10½ to 12½, and 2 to 4 (c).	Cab., Car., Ck., Dr., En., Ga., Pa., Pr.	171	96	75	171	152	335	15	2	13	0	2	5
42	Portland Day-School	Oral		9 to 12 and 2 to 4	None	50	27	23	50	43	84	6	0	6	0	0	6
43	Rhode Island School	do.		9 to 1	Se.	41	15	26	41	36	81	5	0	5	0	0	5
44	St. Louis Day-School	Manual		8¾ to 12 and 1 to 3¼	None	34	18	16	0	21	137	2	1	1	0	2	0
45	N. E. Industrial School	Combined,	A.	9 to 12 and 2 to 4	None	32	22	10	23	25	.....	3	0	3	1	1	1
46	Dakota School (a)	Combined,	G.	9 to 12 and 2 to 4	Car., Fa., Pr., Ti.	51	34	17	16	47	.....	5	3	2	2	1	1
47	Milwaukee Day-School	Oral		8¾ to 11¾ and 12½ to 2½	Pr.	49	31	18	49	34	64	6	1	5	0	0	5
48	Pennsylvania Oral School	do.		8¼ to 11¾ and 1 to 2½	Ho., Se., Wt.	53	30	23	53	44	73	5	0	5	0	0	5
49	New Jersey School	Combined,	G.	8½ to 12 and 1 to 2½	Car., Dr., Pr., Sh.	134	67	67	.....	122	206	9	2	7	0	2	1
50	University of Deseret	Manual		8 to 1	Car., Kn., Pr., Se., Sh.	43	30	13	0	25	65	3	1	2	1	0	0
51	Northern New York Institution	Combined,	A.	9 to 12 and 1½ to 3½	Dr., Sh., Ta.	89	53	36	18	83	103	6	4	2	0	2	1
52	Florida Institute	Combined,	B.	8 to 12½	None	18	11	7	10	17	25	2	1	1	0	0	1
53	New Mexico School	Manual		9 to 12 and 1½ to 3½	None	9	7	2	0	7	11	1	1	0	1	0	0
54	Washington School	Combined,	E.	9 to 12 and 1½ to 3½	None	33	20	13	9	.....	34	3	2	1	0	0	2
55	New Orleans Public School	Manual		9 to 2½	None	8	7	1	0	8	15	1	1	0	0	0	0
56	Evansville School	do.		8¾ to 11¾ and 1½ to 4	None	30	23	7	0	23	37	2	1	1	1	1	0
57	Cincinnati Oral School	Oral		8½ to 2½	None	20	5	15	20	20	27	3	0	3	0	0	2
58	La Crosse Oral School	do.		9 to 12 and 1½ to 4	None	8	6	2	8	7	.....	1	0	1	0	0	1
59	Texas Institution for Colored	Combined,	A.	8½ to 11¼ and 1½ to 3½	Dr., Sh.	40	26	14	5	32	44	3	2	1	0	1	1
60	North Dakota School	Manual		9 to 12 and 1½ to 4	None	17	10	7	0	17	17	2	1	1	1	1	0
61	Toledo Deaf-Mute School	do.		4½ hours	None	17	5	12	0	12	17	1	1	0	1	0	0
62	Wausau Day-School	Oral		9 to 12 and 1 to 3	None	8	6	2	8	7	8	1	0	1	0	0	1
63	Public Schools					8,572	4,846	3,726	3,403	7,245	28736	601	248	353	80	88	187
14	Denom'l and Pri. Sch'ls (f)					329	170	159	279	301	746	40	9	31	0	2	26
77	Schools in the United States					8,901	5,016	3,885	3,682	7,546	29482	641	257	384	80	90	213

* See pages 64 — 69. ** Including those who have left school during the year. † Including the principal. ‡ Not including the semi-mute. (a) For the year 1889. (b) One session for school and one for shops, by a system of rotation. (c) Two sessions for school and one for shops, by a system of rotation. (d) Two sessions for school and two for shops, by a system of rotation. (e) ⅔ pupils in school and ⅓ in shops. (f) See page 60. § Bak.—Baking. Bas.—Basket-making. Bl.—Blacksmithing. Bo.—Book-binding. Br.—Broom-making. Cab.—Cabinet-making. Car.—Carpentry. Ch.—Chair-making. Ck.—Cooking. Cl.—Clay modelling. Co.—Coopery. Dr.—Dress-making. En.—Engineering. Fa.—Farming. Fl.—Floriculture. Ga.—Gardening. Gl.—Glazing. Ho.—Housework. Kn.—Knitting. Ma.—Mattress-making. Mi.—Millinery. Mo.—Moulding. Mw.—Machine work. Pa.—Painting. Ph.—Photography. Pl.—Plumbing. Pn.—Pattern-making. Pr.—Printing. Se.—Sewing. Sh.—Shoemaking. Ta.—Tailoring. Ti.—Tinning. To.—Tool-making. Wc.—Wood-carving. We.—Wood-engraving. Wt.—Wood-turning.

TABULAR STATEMENT OF AMERICAN SCHOOLS FOR THE DEAF, 1890—Continued.

PUBLIC SCHOOLS IN THE UNITED STATES—Continued.

	Name.	Vacation.	How Supported.	Value of buildings and grounds.	Expenditure last fiscal year.		No. vols. in library.
					For support.	For build'gs and gro'ds.	
1	American Asylum	Last Wed. in June to second Wed. in Sept	Endowment and N. E. States	$250,000	.....	.....	2,000
2	New York Institution	Fourth Wed. in June to first Wed. in Sept	State, counties, and pay pupils	456,000	$98,684	$6,124	4,650
3	Pennsylvania do	Last Wed. in June to Sept. 15	State endowment, and pay pupils	850,000	103,172	2,900	6,400
4	Kentucky do	June 19 to Sept. 10	State	176,500	36,877	7,130	1,650
5	Ohio do	Third Wed. in June to second Wed. in Sept	do	750,000	74,700	3,500	2,014
6	Virginia do*	Second Wed. in June to first Wed. in Sept	do	250,000	.....	.....	250
7	Indiana do	Second Week in June to fourth Week in Sept	do	189,600	49,999	46,034	3,800
8	Tennessee School	Second Wed. in June to second Fri. in Sept	do	150,000	26,000	7,000	700
9	North Carolina Institution*	Second Wed. in June to second Wed. in Sept	do	75,000	40,000	.....	1,800
10	Illinois do	Second Wed. in June to third Wed. in Sept	do	400,000	94,000	9,000	11,750
11	Georgia do (a)	Third Wed. in June to second Wed. in Sept	do	60,000	.....	9,000	1,200
12	South Carolina do*	Last Wed. in June to first Wed. in Oct	State and pay pupils	55,000	13,188	1,100	550
13	Missouri do	Second Wed. in June to second Wed. in Sept	State	250,000	49,054	.....	1,100
14	Louisiana do	June 1 to Oct. 1	do	200,000	12,000	10,000	200
15	Wisconsin School	Second Wed. in June to first Wed. in Sept	do	110,000	35,836	909	1,400
16	Michigan do	Thurs. after June 7 to third Wed. in Sept	do	419,755	57,000	500	2,331
17	Mississippi do	Third Wed. in June to first Mon. in Oct	do	125,000	13,972	1,500	500
18	Iowa do	Second Wed. in June to second Wed. in Sept	do	400,000	37,800	27,000	1,800
19	Texas Asylum	1st Wed. in June to 1st Wed. in Sept	do	150,000	35,624	3,477	600
20	Columbia Institution	Wed. before last Wed. in June to Thurs. before last Thurs. in Sept.	United States and pay pupils	700,000	58,675	4,300	3,550
21	Alabama do	June 10 to Sept. 10	State	100,000	12,568	5,000	600
22	California do*	Second Wed. in June to 4th Wed. in August	do	442,000	48,166	95,000	1,400
23	Kansas do	Second Wed. in June to second Wed. in Sept	do	178,000	36,746	.....	1,300
24	Le Couteulx St. Mary's Inst	Wed. before last week in June to first Mon. in Sept	State, counties, and pay pupils	153,000	28,705	.....	660
25	Minnesota School	First Wed. in June to second Wed. in Sept	State	200,000	34,860	8,000	1,300
26	N. Y. Inst. for Imp'v'd Ins'n	Third Wed. in June to first Wed. in Sept	State, counties, and pay pupils	350,000	41,593	12,748	900
27	Clarke Institution	Forty weeks after third Wed. in Sept. to third Wed. in Sept	Endowment, N. E. States, and pay pupils.	83,500	28,729	1,583	1,700

28	Arkansas Institute	Second Wed. in June to first Wed. in Oct.	State	90,000	16,355	1,000	512
29	Maryland School	Third Wed. in June to second Wed. in Sept.	do	250,000	26,380	.....	3,000
30	Nebraska Institute	Middle of June to middle of Sept.	do	115,000	24,456	1,050	1,000
31	Horace Mann School	Last Tues. in June to first Wed. in Sept.	State and city	118,500	10,506	29,189	525
32	St. Joseph's Institute	Last Fri. in June to second Mon. in Sept.	State, counties, and pay pupils	266,629	55,932	14,037	650
33	West Virginia Institution*	Forty weeks after second Wed. in Sept. to second Wed. in Sept.	State	70,000	25,834	.....	796
34	Oregon School	May 1 to first Wed. in Sept.	do	6,000	5,660	.....	.....
35	Md. School for Colored*	June 25 to Sept. 10	do	30,000	7,194	703	80
36	Colorado Institute*	First Wed. in June to first Wed. in Sept	do	155,000	30,000	80,000	600
37	Chicago Day-Schools	June 28 to first Mon. in Sept.	City	.....	.....	.....	.....
38	Central N. Y. Institution	Second week in June to third Wed. in Sept.	State and counties	125,000	38,846	1,832	.....
39	Cincinnati Public School	June 23 to second Mon. in Sept.	City	.....	700	.....	.....
40	Western Penn'a Institution	Last Wed. in June to first Wed. in Sept.	State and voluntary contributions	189,967	34,904	.....	776
41	Western New York Institution	Forty-two w'ks after first Mon. in Sept. to first Mon. in Sept.	State, counties, and pay pupils	100,000	37,721	3,145	1,500
42	Portland Day-School	Last Sat. before July 4 to second Mon. in Sept.	State and city	.....	.....	.....	.....
43	Rhode Island School	Last Fri. in June to first Mon. in Sept.	State	.....	4,910	.....	96
44	St. Louis Day-School	Second Friday in June to first Mon. in Sept.	City	.....	.....	.....	.....
45	N. E. Industrial School	Third Wed. in June to second Tues. in Sept	Voluntary contributions and State	12,000	4,145	.....	450
46	Dakota School (*a*)	Second Wed. in June to second Wed. in Sept	State	.....	.....	.....	.....
47	Milwaukee Day-School	Last Fri. in June to first Mon. in Sept.	State and city and county	15,000	5,000	.....	25
48	Penna. Oral School	June 20 to Sept. 1	State	65,000	8,760	13,793	.....
49	New Jersey School	June 16 to Sept. 10	do	100,000	.....	.....	500
50	University of Deseret	Second Fri. in June to first Mon. in Sept.	Territory and pay pupils	100,000	7,091	35,000	25
51	Northern N. Y. Institution	Second Wed. in June to second Wed. in Sept.	State and counties	67,000	22,477	21,757	.....
52	Florida Institute*	Second Mon. in June to Oct. 1	State	16,000	5,000	3,500	.....
53	New Mexico School	Third week in June to second week in Sept	Territory and pay pupils	.....	1,190	.....	60
54	Washington School*	Thurs. after last Wed. in May to last Wed. in Aug.	State	75,000	.....	.....	.....
55	New Orleans Public School	July 1 to Oct. 1	City	.....	734	.....	.....
56	Evansville School	First Thurs. in June to first Mon. in Sept	do	.....	1,800	.....	.....
57	Cincinnati Oral School	June 20 to Sept. 8	State and city	.....	1,250	.....	.....
58	La Crosse Oral School	First Mon. in Sept.	do	.....	.....	.....	.....
59	Texas Institution for Colored*	June 15 to Sept. 15	State	37,000	16,000	600	.....
60	North Dakota School	Second Wed. in June to second Wed. in Sept.	State	.....	.....	.....	.....
61	Toledo School	June 20 to first Mon. in Sept.	City	.....	.....	.....	.....
62	Wausau Day-School	June 18 to Sept. 8	State and city	.....	.....	.....	.....
—							
63	Public Schools.						
14	Denominational and Private Schools. (See next page.)						
—							
77	Schools in the United States.						

*Contains a department for the blind also, the expenses of which are included in the statement of expenditures.
(*a*) For the year 1889.

TABULAR STATEMENT OF AMERICAN SCHOOLS FOR THE DEAF, 1890—Continued.

B.—Denominational and Private Schools in the United States.

	Name.	Location.	Date of opening	Chief Executive Officer.
1	Whipple's Home School for the Deaf	Mystic, Conn	1869	Margaret Hammond, Principal.
2	German Evangelical Lutheran Institute for the Deaf	Norris, Mich	1873	D. H. Uhlig, Director.
3	St. John's Catholic Deaf-Mute Institute	St. Francis, Wis.	1876	Rev. M. M. Gerend, President.
4	Mr. Knapp's Institute	Baltimore, Md. (*a*)	1878	F. Knapp, Principal.
5	McCowen Oral School for Young Deaf Children	Englewood, Ill. (*b*)	1883	Miss Mary McCowen, Principal.
6	Ephpheta School for the Deaf	Chicago, Ill. (*c*)	1884	M. C. Hendrick, Principal.
7	Maria Consilia Deaf-Mute Institute	St. Louis, Mo. (*d*)	1885	Sister M. Adele, Principal.
8	Miss Keeler's Articulation Class for Deaf-Mutes (*l*)	New York, N. Y. (*e*)	1885	Miss S. W. Keeler, Principal.
9	St. Mary's Institute for Deaf-Mutes	St. Paul, Minn. (*g*)	1886	Miss Nardin, President.
10	Cathedral School for the Deaf (*l*)	Cincinnati, O. (*f*)	1887	E. P. Cleary, B. A., Teacher.
11	Miss Parker's School for the Deaf	St. Louis, Mo. (*k*)	1887	Miss Rilla L. Parker, Principal.
12	Sarah Fuller Home for Little Children Who Cannot Hear	West Medford, Mass. (*h*)	1888	Miss Eliza L. Clark, Principal & Matron.
13	Eastern Iowa School for the Deaf	Dubuque, Iowa	1888	De Coursey French, Principal.
14	Albany Home Oral School for the Deaf	Albany, N. Y. (*i*)	1889	Miss Anna M. Black, Principal.

	Name.	No. of Pupils. During the Year.* Total.	Male.	Female.	No. taught articulation.	Present Dec. 1, 1890.	No. of Instructors.† Whole No.	Male.	Female.	Deaf-mute.‡	Semi-mute.	Articulation	Method of Instruction. (*m*)	School-hours.	Industries Taught.
1	Whipple's Home School	23	14	9	23	23	3	0	3	0	0	3	Oral	9 to 12 and 2 to 4½	[Tailoring. Dressmaking, Housekeeping,
2	Germ. Ev. Lutheran Institution	44	21	23	44	44	3	3	0	0	0	3	...do	9 to 12 and 2 to 4½	None. [Shoemaking.
3	St. John's Cath. Institute	29	17	12	19	29	4	2	2	0	0	2	Combined, E.	8 hours	Carpentry, Carving, Painting,
4	Mr. Knapp's Institute												Oral		
5	McCowen Oral School	25	14	11	24	23	6	1	5	0	0	5	Oral and Aural	8 to 3	None. [carving.
6	Ephpheta School	58	24	34	58	54	4	0	4	0	0	3	Combined, B.	9 to 3	Sewing, Modelling, Wood-
7	Maria Consilia Institute	37	16	21	37	34	5	0	5	0	0	1	Combined, A.	9 to 11½ and 1 to 3½	Dressmaking and Printing.
8	Miss Keeler's Class (*l*)	12	8	4	12	10	2	1	1	0	0	2	Oral	9 to 12 and 12½ to 2	None.
9	St. Mary's Institution	38	22	16	34	38	3	0	3	0	0	3	Combined, G.	6½ hours	None.
10	Cathedral School (*l*)	20	10	10	0	15	2	1	1	0	1	0	Manual	9 to 11 and 2 to 4	None.
11	Miss Parker's School	10	8	2	10	9	1	0	1	0	0	1	Oral	9 to 3	None.
12	Sarah Fuller Home	11	7	4	11	10	4	0	4	0	0	1	Oral		None.
13	Eastern Iowa School	15	6	9	0	6	1	1	0	0	1	0	Manual	9 to 12 and 2 to 4	None.
14	Albany School	7	3	4	7	6	2	0	2	0	0	2	Oral	9 to 1½	None.
14	Denom. and Private Schools	329	170	159	279	301	40	9	31	0	2	26			

	Name.	Vacation.	How Supported.	Total have rec'd instr'n.
1	Whipple's Home School	June 5th to Sept. 3d	Tuition fees and State and towns	
2	Germ. Ev. Lutheran Inst'n	July 15th to September 1st	Tuition fees and Lutheran Congregations	170
3	St. John's Cath. Institute	End of June to first week in Sept	Voluntary contributions and tuition fees	199
4	Mr. Knapp's Institute			
5	McCowen Oral School	Middle of June to middle of Sept	Tuition fees	57
6	Ephpheta School	Last Friday in June to first Monday in Sept	Ephpheta Society	95
7	Maria Consilia Institute	Last week of June to first week of Sept	Tuition fees and contributions	69
8	Miss Keeler's Class (*l*)	Third Wednesday in June to second week in Sept	Tuition fees	15
9	St. Mary's Institution	June 25th to first Monday in September	Voluntary contributions	52
10	Cathedral School (*l*)	Third Wednesday in June to first Monday in Sept.	Tuition fees and Archbishop	28
11	Miss Parker's School	Middle of June to Sept. 14th		15
1	Sarah Fuller Home	No regular vacations	Private subscription	21
13	Eastern Iowa School	June 12th to Sept. 15th	Contributions, fairs, and exhibitions	18
14	Albany School	Last of June to second week in September	Tuition fees	7
14	Denom. and Private Schools			746

* Including the pupils who have left during the year. † Including the principal. ‡ Not including the semi-mute teachers. (*a*) Nos. 201–205 Holliday street.
(*b*) 6550 Yale street. (*c*) 409 S. May street. (*d*) 1849 Cass Avenue. (*e*) 27 East Forty-sixth street. (*f*) Cor. Mound and Elizabeth streets.
(*g*) 536 Mississippi street. (*h*) 40 Canal street. (*i*) 42 Lancaster street. (*k*) 2945 Olive street. (*l*) For the year 1890. (*m*) See pages 64 — 69.

TABULAR STATEMENT OF AMERICAN SCHOOLS FOR THE DEAF, 1890—Continued.

C.—Schools in Canada.

	Name.	Location.	Date of opening.	Chief Executive Officer.
1	Catholic Male Deaf and Dumb Institution for the Province of Quebec	Mile-End, near Montreal, P. Q..	1848	Rev. J. B. Manseau, C. S. V., Principal.
2	Catholic Female Deaf-Mute Institution (*d*)	Montreal, P. Q. (*a*)	1851	Sister Charles of Providence, Superioress.
3	Halifax Institution for the Deaf and Dumb	Halifax, N. S.	1857	J. Scott Hutton, M. A., Principal.
4	Ontario Institution for the Deaf and Dumb	Belleville, Ontario	1870	R. Mathison, Superintendent.
5	Mackay Institution for Protestant Deaf-Mutes and the Blind	Montreal, P. Q. (*b*)	1870	John I. Ashcroft, Superintendent.
6	Fredericton Institution for the Education of the Deaf and Dumb	Fredericton, N. B.	1882	Albert F. Woodbridge, Principal.
7	Manitoba Institution for the Education of the Deaf	Winnipeg, Manitoba..	1888	D. A. McDermid, Principal.
7	Schools in Canada.			

	Name.	No. of Pupils. During the Year.* Total.	Male.	Female.	No. taught articulation.	Present Dec. 1, 1890.	Total have received instruction.	No. of Instructors.† Whole No.	Male.	Female.	Deaf mute.‡	Semi-mute	Articulation.	Method of Instruction (*c*).	School-hours.	Industries Taught.**
1	Catholic Inst'n, (Male)	120	120	0	59	130	560	30	30	0	2	0	28	Combined, B.	8 to 9, 10½ to 12, 1½ to 4½	Ba., Bl., Bo., Cab., Car., Fa., Ga., Pa., Pr., Sh., Ta., Wt.
2	Catholic Inst'n, (Female) (*d*)	165	0	165	78	147	580	36	0	36	2	0	15	..... do.....C..	6 hours	Art, Em., Kn., Sc., Weaving.
3	Halifax Institution	74	46	28	31	61	345	6	3	3	2	0	1	..... do.....A ..	9 to 11, 11½ to 12¾ and 2 to 4	Car., Ga., Sh.
4	Ontario Institution	291	159	132	42	261	872	16	8	8	3	3	1	..... do.....A ..	9 to 12 and 1½ to 3	Car., Dr., Sh., Ta.
5	Mackay Institution	48	28	20	25	44	134	5	1	4	0	0	3	.... do.....E..	9 to 12 and 1½ to 3½	Cab., Car., Dr., Pr., Wc.
6	Fredericton Institution	23	13	10	2	20	43	3	3	0	1	0	0	..... do.....G..	9 to 12 and 2 to 4	None.
7	Manitoba Institution	30	21	9	3	26	30	3	1	2	0	1	1	..... do.....E ..	9 to 11⅝ and 1½ to 3½	Se., Wc.
7	Schools in Canada	751	387	364	240	689	2,564	99	46	53	10	4	49			

	Name.	Vacation.	How Supported.	Value of build'gs and grounds.	Expenditure Last Fiscal Year.		No. volumes in library.
					For support.	For buildings and grounds.	
1	Catholic Inst'n, (Male).....	Third Wed. in June to first Wed. in Sept.....	Province, pupils, and vol. contributions.....	.....	.....	.....	1,000
2	Catholic Inst'n, (Female) (*d*)	July 1st to Sept. 1st.....	Province and voluntary contributions.....	.....	.....	.....	1,200
3	Halifax Institution	First Wed. in July to first Wed. in Sept	Province and voluntary contributions	.....	$8,668	$462	.....
4	Ontario Institution.....	Third Wed. in June to second Wed. in Sept.....	Province.....	$210,000	40,753	7,000	1,700
5	Mackay Institution.....	Third Wed. in June to second Wed. in Sept.....	Province, pupils, and vol. contributions.....	45,800	6,471	1,059	500
6	Fredericton Institution.....	July 1 to Sept. 1.....	Province and voluntary contributions.....	20,000	4,060	13,000	.....
7	Manitoba Institution	Second Wed. in June to second Wed. in Sept.....	Province.....	35,000	5,790	11,000	300
7	Schools in Canada.						

* Including those who have left school during the year. † Including the principal. ‡ Not including the semi-mute teachers. ** Ba.=Baking. Bl.=Blacksmithing. Bo.=Book-binding. Cab.=Cabinet-making. Car.=Carpentry. Dr.=Dress-making. Em.=Embroidering. Fa.=Farming. Ga.=Gardening. Kn.=Knitting. Pa.=Painting. Pr.=Printing. Se.=Sewing. Sh.=Shoemaking. Ta.=Tailoring. Wc.=Wood-carving. Wt.=Wood-turning. (*a*) No. 401 St. Denis street. (*b*) Notre Dame de Grace. (*c*) See pages 64—69. (*d*) For the year 1889.

METHODS OF INSTRUCTION IN AMERICAN SCHOOLS.

THE "Methods of Instruction" named in the foregoing Tabular Statement of American Schools (pages 56, 57, 60, 62) may be defined as follows:

I. *The Manual Method.*—The sign-language, the manual alphabet, and writing are the chief means used in the instruction of the pupils, and the principal objects aimed at are mental development and facility in the comprehension and use of written language. The degree of relative importance given to these three means varies in different schools; but it is a difference only in degree, and the end aimed at is the same in all. If the pupils have some power of speech before coming to school, or if they possess a considerable degree of hearing, their teachers, if they themselves hear and speak, usually try to improve their utterance by practice; but no special teachers are employed for this purpose, and comparatively little attention is given to articulation and speech-reading.

The schools in America following this method are thirteen in number, viz., the Georgia, Maryland Colored, Cincinnati Public, St. Louis, Deseret, New Mexico, New Orleans, Evansville, Cincinnati Cathedral, Eastern Iowa, North Dakota, and Toledo schools, and the National College. The whole number of pupils during the year was 402.

II. *The Oral Method.*—Articulation and speech-reading, together with writing, are made the chief means of instruction, and facility in articulation and speech-reading, as well as mental development and written language, is aimed at. Signs are used as little as possible, and the manual alphabet is generally discarded altogether. There is a difference in different schools in the extent to which the use of natural signs is allowed in the early part of the course, and also in the prominence given to writing as an auxiliary to articulation and speech-reading in the course of instruction; but they are differences only of degree, and the end aimed at is the same in all. The schools in America following this method are nineteen in number, viz., the New York Improved Instruction, Clarke, Horace Mann, St. Joseph's,* Portland, Rhode Island, Milwaukee, Pennsylvania

*"Except in the case of some of the older pupils, for whom we find the Combined method more advantageous." Madam E. NARDIN, President.

Oral, Cincinnati Oral, La Crosse, Wausau, Whipple's, German Lutheran,* Mr. Knapp's, McCowen,† Miss Keeler's, Miss Parker's, Sarah Fuller, and Albany schools. Total number of pupils during the year (not including those of Mr. Knapp's Institute, from which returns were not received), 1,104.

III. *The Combined System.*—Articulation and speech-reading are regarded as very important, but mental development and the acquisition of language are regarded as still more important. It is believed that in many cases mental development and the acquisition of language can be better attained by some other method than the Oral, and, so far as circumstances permit, such method is chosen for each pupil as seems best adapted to his individual case. Articulation and speech-reading are taught where the measure of success seems likely to justify the labor expended. The schools in America using some form of the Combined System are fifty-two in number, viz., the American, New York, Pennsylvania,‡ Kentucky, Ohio, Virginia,‡ Indiana, Tennessee, North Carolina, Illinois, South Carolina, Missouri, Louisiana, Wisconsin, Michigan, Mississippi, Iowa, Texas, Kendall, Alabama, California, Kansas, Le Couteulx St. Mary's, Minnesota, Arkansas, Maryland, Nebraska, West Virginia, Oregon, Colorado, Chicago, Central New York, Western Pennsylvania, Western New York, New England Industrial, Dakota, New Jersey, Northern New York, Florida, Washington, Texas Colored, St. John's Catholic, Ephpheta, Maria Consilia, St. Mary's, Montreal Catholic (both Male and Female), Halifax, Ontario, Mackay, Fredericton, and Manitoba schools. The schools during the year contained 8,146 pupils, of whom 2,818 were taught articulation and speech-reading. The number taught articulation and speech-reading in each school may be ascertained from the foregoing Tabular Statement of American Schools.

The various methods in which the Combined system is applied in American schools may be classified as follows:§

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* *German Lutheran Institution.*—"The German language is used in the oral instruction." D. H. UHLIG, Director.

†*McCowen Oral School.*—"Oral and Aural." Miss MARY MCCOWEN, Principal.

‡ The Principal of the Pennsylvania Institution prefers to designate the methods there pursued as "Manual and Oral" rather than "Combined," and the Principal of the Virginia Institution the methods there pursued as "Manual." See page 67.

§ In cases where heads of schools replying to our circular of inquiry

A. The general instruction of the pupils is carried on chiefly by the Manual method. Part of them receive special training in articulation and speech-reading. The schools following this method are sixteen in number, viz., the American, Ohio, Indiana, Mississippi, Texas, Kansas, West Virginia, Oregon, Chicago, Western Pennsylvania, New England Industrial, Northern New York, Texas Colored, Maria Consilia, Halifax, and Ontario schools. Total number of pupils during the year, 2,465; number taught articulation and speech-reading, 661.

A. B. Part of the pupils are taught by the Manual method, others by the Oral method. Of the former, part receive special training in articulation and speech-reading. All are permitted to mingle freely with one another out of school-hours. This is the method of ten schools, viz., the Kentucky, Illinois, Missouri, Wisconsin, Michigan, California, Minnesota,* Arkansas, Maryland, and Colorado schools. Total number of pupils, 2,396; number taught articulation and speech-reading, 681.

A. E. The general instruction of the pupils is carried on chiefly by the Manual method. Part of them receive special training in articulation and speech-reading. Some of the teachers also use articulation and speech-reading, in addition to the manual alphabet and writing, as a means of instruction with part of their pupils. This is the method of the Kendall and Central New York schools, containing during the year 214 pupils, of whom 190 were taught articulation and speech-reading.

B. Some of the pupils are taught by means of the Manual method, and others by the Oral method. These two classes are

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have given some further explanation of the method pursued than is indicated by our definitions, their statements are quoted in foot-notes.

**Minnesota School.*—"It should also be remembered that all of our pupils make trial of articulation, and are dismissed from the oral classes upon the recommendation of the teacher of articulation, and only then when the teacher of articulation decides they are incapable of obtaining an education by the Oral method. Moreover, in class-rooms we lay great stress upon object teaching, writing from actions, and all real combinations of actions such as we are able to produce in the school-room. We resort to this method that the natural sign-language may not be made too prominent. The manual alphabet, writing, lip-reading, and articulation are freely used by the teachers and pupils in the class-room and in social intercourse. We have not yet organized a class in auricular training, although we use quite freely Currier's ear trumpet with those who are capable of receiving instruction through the sense of hearing. I claim to use every method of instruction that seems to me of service in educating deaf children."—J. L. Noyes, Superintendent.

permitted to mingle freely with one another out of school-hours. This is the method of nine schools, viz., the Virginia,* Tennessee (?),† North Carolina, South Carolina, Alabama, Nebraska, Florida, Ephpheta, and Montreal Catholic Male schools, containing during the year 959 pupils, of whom 277 were taught by the Oral method.

B. C. Some of the pupils are taught by means of the Manual method, and others by the Oral method. Of the latter, part are permitted to mingle freely out of school-hours with the manually-taught pupils; others are kept entirely separate from them, and from those who mingle with them, out of school-hours as well as in the school-rooms. This is the method of the Pennsylvania Institution, containing during the year 494 pupils, of whom 118 were taught by the Oral method. "Manual and Oral," rather than "Combined," are the terms Mr. Crouter prefers to use in describing the methods of the Institution.

C. Some of the pupils are taught by means of the Manual method, and others by the Oral method. These two classes are kept entirely separate out of school-hours as well as in the school-rooms. This is the method of the Montreal Catholic Female Institution, containing (during the year 1889) 165 pupils, of whom 78 were taught by the Oral method.

D. The general instruction of the pupils is carried on chiefly by means of the manual alphabet and writing, without the use of the sign-language. All the pupils receive special training in articulation and speech-reading. This is the method of the Western New York Institution, which contained during the year 171 pupils. Mr. Westervelt calls this "The American Vernacular Method."

E. The sign-language, the manual alphabet, writing, articulation, and speech-reading are all used as means of instruction, by the same teachers and with the same pupils. This method is pursued in six schools, viz., the New York,‡ Le Couteulx St.

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* *Virginia Institution.*—Mr. Doyle describes the method thus: "*Manual.* Lessons given to certain pupils by articulation. No *combination* of the two methods." This corresponds to our definition of the "Combined System, B," and we, therefore, take the liberty of classifying it as such.

† *Tennessee School.*—"B covers our method in the main. Some pupils (semi-mutes) in Manual classes of speaking teachers are required to recite orally."—Thos. L. Moses, Principal.

‡ *New York Institution.*—"All the pupils are taught articulation for one hour daily."—I. L. Peet, Principal.

Mary's, Washington, St. John's Catholic, Mackay, and Manitoba schools. Total number of pupils during the year 648; number taught articulation and speech-reading, 551.

F. In addition to one or more of the methods above described, auricular training is given to a part of the pupils in eleven "Combined System" schools, viz., the New York, Indiana, Illinois, Mississippi, Kendall, Kansas, Le Couteulx St. Mary's, Minnesota, Arkansas, Nebraska,* and Colorado schools. Auricular instruction is also made a prominent feature of the McCowen School.

G. Six schools are reported as following the Combined System, but we are not informed as to which of the above subclasses the method pursued belongs, viz., the Iowa, Dakota, Louisiana, New Jersey, St. Mary's, and Fredericton schools. Total number of pupils in these schools during the year, 634; number taught articulation and speech-reading, 91.

The following is a summary of the statistics of the methods of instruction in American schools, including Canada, for the year 1890:†

Total number of pupils	9,652
Number in Manual method schools	402
" " Oral method schools	1,104
" " Combined System schools	8,146
Number taught exclusively by the Manual method	5,730
" " articulation and speech-reading	3,922
Number taught articulation and speech-reading in Combined System schools	2,818
Number taught exclusively by the Oral method‡	1,578
" " articulation and speech-reading by the "Combined A" method	661
" " by the "Combined A. B" method	681
" " " "Combined A. E" method	190
" " " " B" "	277
" " " " B. C" "	118
" " " " C" "	78

* *Nebraska Institute.*—"Instead of saying that 'auricular training is given to a part of the pupils' in this Institute, please say that part of them are taught by the auricular method."—J. A. GILLESPIE, Superintendent.

† In a few cases, where the returns for the year 1890 were not received, those for 1889 are given.

‡ Not including those pupils of the "Combined A. B" schools so taught, since the numbers of the "A" and "B" pupils, respectively, in these schools are not given.

Number taught by the "Combined D" method	171
" " " " E" "	551
" " by method not specified	91
Number of articulation teachers	262
Number of articulation teachers in Oral method schools (including principals)	105
" " in Combined System schools (not including principals)	157

E. A. F.

SCHOOL ITEMS.

Alabama Institute.—The publication of a weekly paper, called the *Messenger*, has been begun. It is edited by Mr. Osceola Roberts, a former pupil and an experienced printer.

A bill has been introduced into the State legislature proposing to establish a separate school for the deaf and blind of the colored race. If the bill passes the school will be at Talladega.

Arkansas Institute.—At the October meeting of the Board of Trustees, Mr. John H. Geary, a graduate of the New York Institution, was appointed a teacher; Miss Eudora Williams, formerly teacher of sewing, was appointed matron; Miss Allie M. Gilliam, a graduate of the Institute, was appointed teacher of sewing; and Mr. W. F. Murphy, of Ohio, was appointed foreman of the shoe-shop.

At the November meeting, Miss Belle C. Elmore, a pupil of the articulation class, was appointed pupil-teacher.

The publication of an excellent magazine prepared especially for deaf children has been begun. It is called the "Supplement to the Arkansas Mite," and contains stories and other articles similar to those of the "Raindrop," adapted to the capacities of deaf children of various grades of advancement. The price of subscription is a dollar a volume; each volume contains six numbers. We hope it will meet with such encouragement from other schools as to justify its continuance.

California Institution.—The gymnasium and the cooking school have been placed upon a purely educational basis. Mr. F. K. Smyth has been appointed director of the gymnasium, and Miss M. A. Davis gives instruction in cooking.

The twenty-fifth anniversary of Dr. Wilkinson's connection with the Institution was pleasantly celebrated by officers and pupils on the first of December last. To the opinion expressed by one of the pupils, that Dr. Wilkinson's success in building up such a magnificent Institution was largely due to "the policy of non-intervention in its internal affairs on the part of the State," Dr. Wilkinson assented, and said that "during his twenty-five years of service no director or State official had ever suggested a person to be employed in the Institution, and for this reason he had been enabled to surround himself with faithful and competent assistants."

Chili Institution.—We learn from the Berlin *Blätter* of October 1, 1890, that a school for the deaf was opened in Santiago, Chili, May 1, 1889. The principal is Mr. Andreas Mierzowski, who was trained for the work in Germany.

Cincinnati Oral School.—Miss Mary S. Breckinridge entered the school in September last as teacher of a primary class. She received her training at Northampton.

Colorado School.—Miss Tillie Garman, late of the Iowa Institution, has been added to the corps of teachers. A mattress shop has been added in the industrial department, and it is hoped soon to introduce shoemaking, broom-making, and harness-making.

The School has recently passed through a scourge of diphtheria, but there was no death from it. Two children died of membranous croup, and one of peritonitis, following typhoid fever.

Eastern Iowa School.—Last summer Mr. French found a deaf and blind girl in a small town near Dubuque, and placed her in his school, where she is making good progress. Her name is Linnie Haguewood. She is ten years old, and lost both hearing and sight by spinal fever at one and a half years of age. She is a good-tempered, bright, and pretty child.

Florida Institution.—Mr. Terrell resigned the position of principal last September, and was succeeded by Mr. Wm. A. Caldwell, of the Philadelphia Institution. Miss Kate King,

one of the teachers of articulation, also resigned her position, but is still in the work, having charge of some private pupils in Ohio. No teacher has as yet been appointed in her place.

But a small portion of the deaf and the blind of this State are in school, and it is difficult to get them, owing to the great extent of the State and the consequent trouble and expense of transportation. Mr. Terrell deserves much credit for his labors in building up the school, and by his resignation the profession loses a zealous worker.

At present no trades are taught, but preparations are being made for teaching printing and photography. One secondary purpose in selecting these two industries is to advertise the school more extensively throughout the State. By sending out printed matter and photographs prepared at the Institution, it is believed that more attention will be attracted to it.

The buildings are situated about a mile north of the historic city gates, through which all carriages pass on their way to and from the Institution. There is an artesian well on the place, furnishing an abundant supply of delicious drinking water, and it is distributed by pipes all over the grounds. The facilities for gardening and horticulture are therefore unsurpassed.

Fredericton Institution.—The new building is now drawing towards completion, and will, it is hoped, be occupied early in the new year. It is a handsome structure and the most prominent building on the river St. John. It will afford accommodation for sixty pupils.

Groningen (Netherlands) Institution.—The centennial of the Institution, which was established in 1790, has been commemorated by the publication of its history by Dr. A. W. Alings, the director. The history is entitled *Beschrijving van het Instituut voor Doofstommen te Groningen*, 1890, 8vo, pp. 64. An accompanying lithograph shows the buildings and grounds.

Halifax Institution.—Miss Bateman, an experienced and efficient teacher, takes entire charge this year of the Articulation Department, while continuing the instruction of a blind deaf-mute, Wm. W. Heulin, who, under her skilful training, is

making encouraging progress. Miss Lizzie Foley, of Morristown, N. J., sister of Miss Julia Foley, of the Pennsylvania Institution, has been added to the staff as teacher of the Primary Class.

Horace Mann School.—The beautiful house that has been built for the School was dedicated on the 10th of November last. Addresses were made by the President of the Boston School Board, Mayor Hart, Governor Brackett, the Hon. Gardiner Greene Hubbard, and others. The Dedicatory Hymn, written for the occasion by Miss Alice C. Jennings, a former pupil of the School, is published elsewhere in the present number of the *Annals*.

Iowa Institution.—At the close of the last school year Mr. McDermid retired to accept the principalship of the Manitoba Institution, Miss Sutton transferred her services to the Philadelphia Institution, and Miss Garman went to the Colorado School. The vacancy caused by the resignation of Mr. McDermid has not yet been filled. Miss Olivia Brünning, formerly of the Indiana Institution, was employed as additional teacher of articulation. Miss Margaret Watkins, lately connected with the Nebraska Institute, and Miss Ollie Tracy, a graduate of this Institution, have been appointed teachers of manual classes.

Kentucky Institution.—Miss Frances Barker, of Columbus, Ohio, has been appointed teacher in the colored department. Miss Barker has had one year's experience in the work.

A new building containing chapel, dining-room, wash-rooms, etc., has just been completed at the colored department, increasing its capacity to seventy-five children.

Louisiana Institution.—Mr. Stephen Shuey, a graduate of the Missouri School and National College, has been appointed teacher of a high class recently organized, and also teacher of printing. The regular publication of the *Pelican* has been resumed under his direction.

The blind pupils were removed last August to a separate building.

McCowen Oral School.—The late "Voice and Hearing School" at Englewood, Illinois, has recently been incorporated under the name of "The McCowen Oral School for Young Deaf Children." The incorporators are prominent business men of Chicago, who have established an endowment fund for its maintenance, in order that children whose parents are not able to pay for their tuition may be admitted. The school will henceforth confine itself more closely than formerly to the education of very young deaf children.

Instruction in Slöjd is now given by a special teacher to all pupils above the Kindergarten class.

Manitoba Institution.—Mr. J. C. Watson, who had been principal for two years, was compelled to resign in September on account of a serious illness, and Mr. D. W. McDermid, late of the Iowa Institution, and originally from the Ontario Institution, was appointed to fill the vacancy. His wife was also elected to the position of teacher.

When this school was organized there was a provision requiring parents to pay for the board of their children. This has been abolished, and hereafter the Institution will be free to all deaf-mutes of school age in the Province. With a compulsory law and a free school, it will not be the fault of the Government of Manitoba if the deaf are not all under instruction.

The new building is now occupied. It is furnished with all modern appliances and conveniences, and affords, on a small scale, comparatively speaking, the comforts of the larger institutions.

Michigan School.—In September last Miss Maggie Bennett was obliged to resign the position of teacher on account of ill health, and the vacancy is filled by Miss Emma Monroe, of Mt. Morris, Michigan.

Minnesota School.—The electric-light plant recently introduced proves very satisfactory. The cost, including two new boilers, an engine, two dynamos, wiring, lamps, etc., was nearly $8,000.

Missouri School.—Miss Mary N. Kouns, of Jefferson City, Mo., was appointed a teacher in October last.

National College.—The recent publication of "Webster's International Dictionary" gives to the world the results of long continued and profound investigations by a member of the College Faculty. Professor Samuel Porter is the author of the "Guide to Pronunciation" which fills about twenty of the large pages of the Dictionary, and in conjunction with the Rev. S. W. Barnum has had charge of the general subject of pronunciation. In the "Guide" he treats phonetics thoroughly from the modern physiological point of view. He agrees in the main with Professor Alexander Melville Bell's system as modified by Professor Henry Sweet, though he differs from them both in some respects.

Nebraska Institute.—A teacher has been added to the aural and oral department. In the aural work those who have come in the last year have increased the percentage of partially deaf in the school, twenty-five per cent. of the pupils now belonging to this class. Whether this condition is peculiar to the State of Nebraska, or whether Mr. Gillespie finds more such cases because he is looking for them, is an interesting question. Twenty per cent. of the pupils of the school may be termed semi-deaf.

North Carolina Institution.—Mr. John C. Miller has been elected teacher in the colored department.

North Dakota School.—The school has a grant of 40,000 acres of land. The constitution provides that it cannot be sold for less than $10.00 an acre. It is now worth on an average about $6.00 per acre. The money to be realized from this land is to be held in trust for the school, and the income only to be used. The principal may be increased, but never decreased.

Northern New York Institution.—Mr. Lewis C. Rider has retired from the profession to engage in other work. Miss Mattie P. Harwood has recovered her health and resumed her place as teacher of articulation.

Ontario Institution.—Mr. James C. Balis, late of the Western Pennsylvania Institution, and his wife, Mrs. Sylvia Chapin Balis, have been added to the corps of instructors.

A fine monument of Scotch granite has been erected to the

memory of the late Mr. S. T. Greene by his deaf and hearing friends. On the dedication of the monument a hymn was rendered in signs by Mr. Greene's successor, Mr. Balis, and addresses were made by Mr. Mathison, Mr. Denys, and the Rev. Canon Burke.

Paris National Institution.—The Institution and the cause of deaf-mute education in general have suffered a serious loss in the death of Mr. Ludovic Goguillot, a teacher in this Institution for the past eleven years, founder of the *Revue Internationale*, and author of a valuable treatise on articulation teaching, reviewed by Professor Gordon in the *Annals*, vol. xxxiv, pages 217–222. Mr. Goguillot died of typhoid fever at the early age of thirty-one.

Pennsylvania Institution.—Mr. William A. Caldwell resigned his position late in September to accept the principalship of the Florida Institution. To fill the vacancy thus created Mr. S. G. Davidson, a graduate of the National Deaf-Mute College, and late editor of the *Silent World*, was appointed.

Miss Anna Carter, for two years a valued teacher in this Institution, and formerly in the California Institution, died of consumption in October. She had resigned her position in April on account of failing health. Her associates speak of her as manifesting "a character of beauty and worth, combining intelligence, culture, simplicity, and faithfulness in an unusual degree; a devoted teacher, a warm and sincere friend, and a model Christian woman."

In the latter part of October after a three days' storm the side walls of one of the wings of the Primary Department in course of erection succumbed to the elements and fell in, causing considerable loss to the contractor. The walls are being rapidly rebuilt, and the work upon that and the other departments is progressing rapidly and favorably.

South Carolina Institution.—Miss Mary O. Sherrerd, of Pennsylvania, has been appointed teacher of articulation in place of Miss Eva Ballard, whose death was mentioned in the last number of the *Annals*.

Texas School.—The recent Report announces the following changes during the past year among the teachers: Mr. Simp-

son has been succeeded by Mr. Geo. H. Putnam, formerly of the Minnesota School, and Mr. Thomas by Mr. A. H. Walker, a son of Mr. N. F. Walker, Superintendent of the South Carolina Institution. Miss Alline Kyle, a graduate of Sam Houston College, has been added to the staff. Mrs. E. Begg has succeeded Mrs. Barrett as first matron, and Miss Mary Franks has succeeded Miss Bones as second matron. A page of the report is devoted to the memory of Mr. Felix E. Smith, a valued member of the Board of Trustees, who died on the 5th of February last.

Toledo Day School.—A day school was established on the 11th of September last at Toledo, Ohio, under the auspices of the city board of education. Mr. A. N. Downing, for five years a teacher in the Ohio Institution, took charge of it at first, but he soon afterwards accepted an appointment in the Western Pennsylvania Institution, and was succeeded by Mr. Alfred F. Wood, formerly principal of the Cincinnati Public School.

University of Deseret.—The Deaf-Mute Department is now occupying its new building. It is situated on the University grounds and has cost $55,000. A boiler-house and shop building costing $5,000 have recently been erected. The department has now capacity for 125 pupils, and as the percentage of deaf mutes in Utah is large, it will not be long before it will be filled. As this is the only institution between the Rocky Mountains and the Pacific, except those in the extreme northwest, it has a large territory from which to draw. It already receives pupils from Idaho and Arizona, and expects soon to have them from other neighboring States.

Virginia Institution.—Mr. H. M. Chamberlayne, of Virginia, a former pupil of this Institution, and also of the New York Institution, was elected in June to fill the vacancy in the corps of instructors occasioned by the resignation of Mr. Jas. H. Lindsay.

Western New York Institution.—Miss Lizzie A. Buckland, a teacher in the Kindergarten, left in June, to be married in July to Judge B. F. Hastings, of Grant, Nebraska. She is succeeded by Miss Rosa H. Halpin, who thus returns to the position she filled before entering the National Deaf-Mute Col-

lege, where she has been studying for the past two years. Miss Louisa C. Magher has been employed as one of the teachers of the intermediate classes.

Since the opening of the school term in September, Mr. E. Lyon has been teaching his phonetic alphabet to the pupils of all the grades above the fifth for two hours daily. The pupils are interested, and valuable results are hoped for.

E. A. F.

MISCELLANEOUS.

Visitors in the School-Room.—Though Miss Moffat treats "Visitors and their Views" in a lively, cheerful manner in her article in the present number of the *Annals*, she writes, as she herself says, "with laughter that is akin to tears," and she evidently feels, as do many other teachers of the deaf, that the subject is one deserving serious consideration.

The editor of the *Goodson Gazette* says, in the number for September 20, 1890:

> We have been having crowds and crowds of visitors lately, in fact ever since the first day school began. Now, we are glad to see, within the proper hours, people who are really interested in our work here, who come because of that interest, and not to gratify mere curiosity. It never was intended, and *it is not right*, that this Institution should furnish daily entertainment to people who come simply for the novelty of the thing and to see how the deaf and blind behave themselves; whether or not they are like other people, etc. It is not fair to pupils sent here; to the State that appropriates money for their education; to the teachers who teach them, or the parents who do without them, that this school should be broken in upon, interrupted every day again and again just as though it were no school at all, but a free museum, filled with human curiosities, surprisingly wonderful because they have sense, are bright and able to learn.
>
> We do not believe that a school of this kind should be annoyed by visitors any more than any other State school. Many have visited the grounds, etc., of the University of Virginia and the Virginia Military Institute, but who ever entered, as a matter of course, the class or lecture rooms of either place?
>
> West Point belongs to the nation, entirely maintained by public money, yet who visiting there dares enter one of those strictly private lecture halls? No; it is wrong, all wrong, this thing of a school being subjected to daily and almost hourly interruptions from whoever may choose to call.

In the National College ordinary visitors are never allowed to interrupt the work of the class-rooms; in the Kendall

School they are admitted only on one day of the week, Thursday. This latter fact is stated in the Washington guide-books, and visitors seldom apply for admission on other days. We should be glad to know what repressive measures, if any, have been found useful in other schools, and to publish any suggestions that might tend to remedy the evil.

On the other hand it should be remembered that visitors in the school-room are not wholly an evil. Our schools are dependent for their support upon the appreciation and sympathy of the public, and nothing is so effectual in awakening intelligent appreciation and sympathy as a visit to the school-room. The legislators who oppose liberal appropriations for the education of our pupils are usually those who have never visited a school for the deaf, while our warmest friends are always those who, from personal observation, best understand our work. Often, too, as Miss Moffat suggests, the presence of visitors may be made the means of useful instruction to the pupils. We agree with "D" in the *Silent Educator* for December, that usually it is not best to interrupt the regular work of the class when visitors enter the room, and certainly the precious minutes of school should never be spent in merely showing off what the pupils have already learned; but some reference to the visitors, and even allowing them to enter into conversation with the pupils by writing, will sometimes give a pleasant variety to the monotony of the daily routine, and at the same time afford the opportunity for valuable instruction and useful practice in language.

Cultivating the Imagination.—Mr. Blattner, in the present number of the *Annals*, questions the correctness of Miss Porter's opinion, expressed in the July number, that our pupils are lacking in imagination. Another correspondent, while approving of Miss Porter's views in general, says:

> One thing I object to, though. The dear soul can never have taught in a western school, or she would not have said "cultivate their imagination." *Our* pupils have great difficulty in reining in their Pegasus sufficiently to bring it down to the *terra firma* of truth. No; I think most of them are ready now for the graduating class, so far as their imagination is concerned.

"*Observations Abroad.*"—In reply to some criticisms in a review of Mr. Hanson's article in the last number of the *Annals*,

made in the Sienese *L'Educazione dei Sordomuti* for November, 1890, by Mr. D. L. Cappelli, Mr. Hanson writes:

Criticisms are always welcome when made in the courteous manner of those by Mr. Cappelli.

The reviewer questions whether a joke was intended by the boy in the Provincial School at Milan, who wrote, "*Una bella donna è un fiore, ma è velenosa,*" believing that he referred to the poisonous plant *Atropa Belladonna.* I think the boy intended to make a joke, because his teacher, upon reading it, was much amused, and, being eager that I should understand it, he translated it at the time into French, rendering "*una bella donna,*" "*une belle femme.*" If the boy had reference to the plant Belladonna, his instructor would most likely have known it. The teacher may have deceived me, but during my short acquaintance with this gentleman, Mr. Antonio Hecker, I formed the highest respect for him, and think it altogether improbable that he would do anything of the kind.*

Mr. Cappelli says that the question of the superiority of the oral method has been discussed and decided in Italy a thousand times. But no matter how often it may have been decided by those who control the schools, it cannot be conclusively recognized as the best system for all, unless it receives the unanimous endorsement of the deaf themselves, particularly the intelligent ones who are in the best position to judge of its advantages and disadvantages to themselves, as well as the less intelligent of their class. Its superiority for a portion of the deaf may be conceded, but, if I was correctly informed, the deaf in Italy, as well as in Germany, are far from unanimous in adjudging it the best system for all. Will Mr. Cappelli address the following questions to the persons named below, and publish their answers in *L'Educazione?*

1st. From your observations does it appear that those instructed by the pure oral method are as well informed on general topics and have as good mental development as those instructed by the earlier sign and manual method?

2d. Do the less intelligent among the deaf, after leaving school, make practical use of their speech in intercourse with the hearing, or do some of them fall back on writing and signs?

3d. Do you think that all the deaf, including the least intelligent, should be instructed orally, or do you think it would be better to teach some of them by the sign method?

4th. State any opinions you may have pertaining to the subject.

To be addressed to Signor L. M. Jarach, Via Mazzini 38, Torino; Signor Eduardo Armandolini, Direzione Generale della Statistica, Roma, and to his wife; Francesco Micheloni, same address as above; Signor Santino Albinola, Via Solferino 44, Milano; Adolph Bollier, care Mr. Jarach, Turin. Some of these have been educated by the oral, others by the sign and manual methods, and they will, I believe, be recognized as fairly representative of the intelligent deaf in Italy.

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*The Milan *Sordomuto* for November, 1890, of which Mr. Hecker is one of the editorial staff, says Mr. Hanson was right in supposing the boy intended to speak of a beautiful lady and not of the plant Belladonna.—E. A. F.

Articles in "Science."—The discussion in *Science* of the marriages of the deaf and their education has continued at intervals during the past quarter. The first five articles were noticed in the last number of the *Annals*, pages 301–303.

6. In *Science* for October 17, 1890, Dr. B. Engelsmann advocates oral instruction. Except the surprising statements that "the sign-language obtained a foothold in this country merely through accident," that "its exponents have sprung from one family here," and that "its advocates are, and always have been, the very ones to fiercely combat every honest attempt to improve the mental condition of this unfortunate class" (semi-mutes), it contains little that would be new to the readers of the *Annals*.

7. In *Science* for October 31, Dr. Philip G. Gillett answers the questions asked him by Dr. Alexander Graham Bell (quoted in the last number of the *Annals*, page 302), as follows:

> My advice in such a case as this would be for the young people to examine themselves carefully as to what their motives are in contemplating matrimony. If they have no higher thought than the animal impulse, I would advise them by no means to enter into that sacred relation; but if they are already so united in heart that each is needful to the happiness of the other, I would advise them as soon as their circumstances are such as to enable them to maintain a family in comfort, whether the children should hear or be deaf, to follow the promptings of their higher nature, with a determination to rear their children to respectability and usefulness, which they can do in one case almost as effectually as in the other. Thus one happy union will certainly be effected; while, if prevented, not only would this be estopped, but probably two unhappy, because uncongenial, ones would ensue. If deafness were a crime, or a disgrace, or entailed suffering, I would certainly discourage it; but since it does not, I deem it wise to encourage such a marriage, if the parties most interested believe, after reflection, that their own happiness will be promoted thereby.

Dr. Gillett then proceeds to give his reasons for encouraging the marriage of the deaf; they are substantially the same as those given in his address before the Chicago "Preachers' Meeting," last summer, and quoted in the *Annals* for July, page 231. He concludes:

> For the foregoing reasons I have long approved, and still do, of the marriage of the deaf; and I believe that, as a general rule, their intermarriage is more congenial, and productive of more happiness, than the marriage of deaf with hearing persons, though I have known most beautiful and happy unions of the latter kind. "Be ye not unequally yoked together," is a Scripture injunction that bears with as much force upon the deaf as upon any others. That it would be

possible in process of time to generate families who would all be deaf, I fully believe. If the object of matrimony was only to produce human animals, irrespective of their mental and spiritual nature, I should advocate the prevention of the marriage not only of the deaf, but of some other classes who labor under physical defects. But this is not the case. A true marriage is upon a higher and holier basis than this. Its essential element is in the affections of a pair whose perfect union is necessary to their happiness. The happiness of this pair I believe to be of more consequence to themselves and to society than the possible or even probable inconvenien of their offspring. I say inconvenience, for deafness is neither a crime nor a disgrace; nor does it inflict any suffering on its subject. There was a time when the deaf were considered but brutes, and classed as idiots, and treated accordingly. That time, all are thankful, is passed; and in our time deaf persons often stand in society the peers of any others, in all that makes true nobility of character and manhood. In education, in mechanical skill, in æsthetic culture, in artistic talent, in true refinement and taste, they are oftentimes above the average of hearing people; and sometimes the deaf member of the family is the one of all his kindred most entitled to respect, because his deafness, having withdrawn him from his surroundings, has placed within his reach an education and culture that enables him to live on a much higher plane than any of his relations enjoy, and than he would have enjoyed if he had not been deaf. There is in society a vast amount of practical ignorance concerning the deaf, which it seems almost impossible to eradicate. This is one of the heritages handed down from former times, when deafness was indeed a great calamity, consigning its subject to perpetual infancy in law, and to dense ignorance for life. But, as already stated, times have changed; and what was once a calamity is now only a serious inconvenience. There are other inconveniences that descend by heredity that we might quite as well combat through matrimony as deafness. Baldness is a physical defect that is often a great inconvenience; but who ever thought of classing the bald-headed among the defective classes, or of regarding baldness as a crime or disgrace? Near-sightedness is a physical defect that is often very inconvenient; but who ever thought to trace the pedigree of bald or near-sighted people, to see if they might enter into wedlock?

8. In *Science* for November 28, Dr. Edward M. Gallaudet calls attention to the fact that there are several classes of deaf persons, some of whom are much more liable than others to transmit the defect to their children. From Dr. Bell's "classification of the deaf into four groups as a guide to marriage" (Minutes of Evidence before the Royal Commission, page 817), he draws the conclusion that with fully one-half of the deaf "there is no more likelihood of giving the legacy of deafness to offspring than with perfectly normal people; and those who oppose the marriage of the deaf among themselves should give due consideration to this important fact." On the

other hand he does not agree with the views of Dr. Gillett, thinking "he errs radically in characterizing total deafness as 'only a serious inconvenience.'" He says:

Deafness is certainly a grave misfortune, and those in whose person or in whose family it inheres are bound by altruistic considerations to take care that by no selfish act or course of theirs the aggregate of misfortune in the world shall be increased. * * *

Were my advice sought by a young deaf-mute, heart-free, and untrammelled by any engagement, I should say that if he or she could marry, on a basis of sincere affection, one possessed of hearing, such a union would be far more to be desired than one with a deaf partner. Such a marriage as I would recommend first would do much towards taking the deaf partner out of the narrow circle of deaf-mute society, with which the deaf are too apt to be content; it would bring a most important element of comfort and practical assistance to the married pair; it would furnish an essential advantage in the training of the children and in the management of the household. But no argument ought to be necessary to prove that a family where one parent can hear has great advantages over one where both parents are deaf; and in the last analysis the interest of the family must take the precedence over that of the individual, for it is the family, and not the individual, that constitutes the unit of society. Many deaf-mutes think more happiness is to be found in a marriage with a deaf person than with one who hears; but this is by no means as certain as Dr. Gillett, or the deaf themselves, suppose, for it involves a question that has not yet been settled, and may never be. I have known some intermarriages of the deaf to result in wretched unhappiness, but I do not for that reason conclude that such marriages must always, or even often, be unhappy. It is undoubtedly true that some marriages of deaf people with those who hear have turned out badly, but Dr. Gillett's admission that he has known "most beautiful and happy unions of this kind" is a sufficient answer to all objection to such unions; and to his admission I may be permitted to add the testimony from experience, of both a son and a brother, that marriage between the deaf and the hearing may be entirely happy and essentially successful.

But I would not have my deaf friends who have intermarried feel that I am putting them under a wholesale condemnation by urging the union of the deaf with the hearing as the ideal marriage for them. I am perfectly aware that circumstances may arise under which it becomes extremely difficult for a deaf person *not* to take a deaf partner. I am old-fashioned enough to believe in falling in love, even in this mercantile age, and in remaining in love through long years of happy married life; and I should be the last to lay a rude hand on a tie that had grown up between two deaf young people which seemed likely to ultimate in that greatest of Heaven's boons, a marriage of sincere affection. In such a case my friendly advice would be to look well into the causes which made the young people deaf, and ascertain whether there was a family tendency towards the disability or not; and if it appeared that no such tendency existed, or that it was very slight, I certainly should not "forbid the banns."

If, on the other hand, such a condition in the families was disclosed as to render the birth of deaf children probable, a reason for hesitation would surely be recognized which every truly benevolent and unselfish mind would regard as serious.

I have several personal friends who have remained unmarried because of the existence in their families of certain mental or physical defects likely to descend to offspring; and as I honor them for their unselfishness, so would I rank high in my esteem a deaf person who lived single for a similar reason. But the consideration of this aspect of the question need not be extended; it may be dismissed with the advice to all young deaf people to look carefully into the matter of "family deafness" before their hearts become entangled with any one, and govern themselves accordingly, remembering all the time that their ideal marriage, because best for the family, is with one who hears.

Dr. Gallaudet also presents at considerable length some arguments in behalf of the Combined System of instruction; these are for the most part familiar to the readers of the *Annals*.

9. In *Science* for December 5 Dr. Engelsmann briefly calls attention to the New York Institution for Improved Instruction, the Clarke Institution, and the Horace Mann School, as affording persons interested the means of convincing themselves by a visit "that congenital deaf-mutes may be taught to use spoken language correctly by articulation and by writing, without the intervention of any artificial signs."

10. In *Science* for December 19, the Hon. Gardiner Greene Hubbard's address, delivered at the twenty-first anniversary of the Horace Mann School, is published. Mr. Hubbard gives an historical sketch of the circumstances that led to the establishment not only of the Horace Mann School, but also of the Clarke Institution, in which he took the most active part, and which was the beginning of the movement in behalf of articulation teaching in America that has since produced so great results. He pays a fitting tribute to the valuable services to the cause rendered by such philanthropists as Horace Mann, Samuel G. Howe, and Dexter S. King, and to the devoted labors of such teachers as Miss Rogers, Miss Fuller, and Miss Bond; but the most interesting part of the address is the story of how, when his own little girl lost her hearing at the age of four, and her parents were anxious to retain her speech and carry on her education, they were told by a teacher of the deaf of whom they asked advice that they could do nothing for their child until she was ten years old, when she could be sent to an institution, and that in the mean time her speech and language must inevitably be lost. Certainly no parent would

receive such a response now from a teacher of the deaf, and it seems almost incredible that it should have been given thirty years ago. In view of the change that has taken place in this respect, and the facilities that now exist for oral instruction, and for early instruction, to all of which Mr. Hubbard's persistent efforts in behalf of the Clarke Institution contributed not a little, well may he ask, "Shall we not rejoice that it has been our privilege to work together for this end, and that out of the affliction of a little child a blessing has come to so many?"

11. In *Science* for December 26 Dr. Gillett calls attention to the fact that in his previous article he had not, as might be inferred from Dr. Gallaudet's statement, overlooked the fact that with a large proportion of deaf parents there is no more likelihood of having deaf children than with hearing parents:

The fact was pressed in my article to which the doctor alludes, and, as he plainly shows, has been admitted by Dr. Bell. Dr. Bell's classification is doubtless the most philosophic of any yet promulgated, but whether it will be sustained by future investigations remains to be seen. Science is progressive because of the ascertainment of new truths. Its history shows us that the science of to-day may not be accepted as the science of to-morrow. It is too soon to predicate any positive theories upon the statistics as yet collected. The time during which they have been collated is too short, and their accuracy too unreliable (some being merely hypothetical, and many furnished by undiscriminating parties) to warrant deducing positive opinions from them, or the enunciation of any general law based upon them. The investigations of Dr. E. A. Fay, now in prosecution, will no doubt be of greater value than any preceding.

It is scarcely half a score of years since a really intelligent movement in this direction was inaugurated by Dr. Alexander Graham Bell, a philanthropist as well as an eminent scientist and inventor. Statistics relative to the deaf had been taken previously, to some extent, in several institutions, but the inquiries for them had not been general. Statistics, supposed to be reliable at the time of taking them, were, by subsequent inquiries, which developed new or additional facts, materially changed; so that former deductions were necessarily reviewed and discarded. One man's lifetime is too short, and his observations too limited, to furnish data upon which to predicate the formulation of a general law. Dr. Bell may have discovered a law governing the offspring of the congenitally deaf persons, or he may have formed an assumption. I think there is as much evidence going to show that an inherent predisposition to deafness exists in some families (using this term in its extended sense), but that it expends its force in a particular line while it remains in others, as there is to show that it perpetuates itself from parent to child. Within my observation there have been more cases of deafness among children only one of whose parents was congenitally deaf than among those both of whose parents were congenitally deaf. I am not certain but that the percentage of the former would also be found less if careful investigation

was made. Statistics could be so presented as to show that the intermarriage of the deaf tends to reduce the number of deaf children more effectually than for the congenitally deaf to marry the hearing, or persons whose deafness was acquired after birth, since by the latter means there is more probability of scattering the infirmity than there is in intensifying the predisposition to it by the former. It is undeniable that this predisposition is not obliterated by marriage with one who has it not; hence Dr. Gallaudet's ideal marriage of the congenitally deaf with the hearing, or Dr. Bell's suggestion that they marry the non-congenitally deaf, if there is any truth in the law of heredity, will most tend to increase the number of the deaf; because, where two persons in whom inheres the probability of having deaf offspring intermarry, there can result only one family of deaf children, whereas, if they marry hearing or non-congenitally deaf persons, two such families may result.

If the congenital deaf-mute must have so much solicitude for his offspring as Dr. Bell and Dr. Gallaudet insist on, shall the hearing person or the non-congenital deaf have none for his? The deaf man or woman has the same right to exercise his judgment in the selection of a partner for life that any other person has. If they desire to compare their family histories with reference to inherent predisposition to deafness, I know of no one who could object, or of no reason why they should not do so, and not as much as that they and all others should consider a phthisical, scrofulous, or cancerous family diathesis. Dr. Gallaudet's argument with reference to the marriage of the deaf with the hearing is good, but is quite as forceful on the other side of the question. Both parties to a marriage have an equal right to forecast the future. No one will deny that a family where one parent is deaf suffers greater disadvantage than one where both parents can hear. Unless there is sincere love between the parties, the hearing person will not enter into such a marriage. A question of this kind is not to be considered from the stand-point of the deaf alone.

Dr. Gillett still maintains that "deafness may properly be termed only a serious inconvenience," and cites striking instances in which, instead of a calamity, it has proved to be a stroke of good fortune in giving the opportunity for higher mental and moral culture than would have been attained without it. He urges the importance of teaching the deaf to regard themselves, not as belonging to a special class who are to be looked after by others, but as standing upon the same plane as others, and under obligation to provide for themselves as others do; "and that, being handicapped with the inconvenience of deafness, they must expect to do a little better than others do in similar walks of life, and thus make themselves desirable to employers." To characterize deafness as "a calamity" or even as "a grave misfortune," he thinks, tends to promote among the deaf the feeling of class separation and dependence, and therefore is objectionable.

With respect to articulation, Dr. Gillett, while agreeing with Dr. Gallaudet as to the desirability of teaching it in all cases where it is likely to produce satisfactory results, objects to two of his statements, viz., that "all deaf children have the organs of speech," and that "all, or nearly all, deaf children can be taught to speak * * * precisely as all, or nearly all, normal children can be taught to sing."

That deaf children have the organ of voice is true, but voice is not speech. The organ of voice is one thing, the organ of hearing is another, but the organ of speech is the union of the two. Speech is the result of the intelligent, combined use of the organ of voice and the organ of hearing in a healthy condition. Deaf-mutes have not the important organ of hearing, and, for this cause alone, have not speech. There is no speech of any race, tribe, or clan of men, however barbarous or cultured, that is not based upon hearing; so that we may say the organ of hearing is as essential for speech as the organ of voice. The two are the physical complements of each other in the production of speech. * * *

Not only are the organ of voice and the organ of hearing, with intelligence, necessary for speech, but they must be in a healthy condition, even to maintain perfect speech after it has been acquired. This is plainly shown by a fact noticed by every observant person, that individuals whose auditory apparatus becomes impaired (though the vocal chords remain in good condition) in middle life, after speech has been fully acquired, and possibly several languages mastered, suffer deterioration of their speech, despite the greatest watchfulness of themselves and their friends. * * *

Dr. Gallaudet's comparison [of the teaching of speech to the deaf with the teaching of singing to hearing children] is not at all a just comparison, if the doctor means speech intelligible to general society. Congenitally deaf persons who readily use speech are more nearly analogous in number and production to good poets than to singers. "*Poeta nascitur non fit*," is a universally accepted adage, whose underlying principle may well be applied to good users of speech who never heard.

Dr. Gillett further discusses the methods of education at considerable length, dwelling especially upon the convenience and usefulness of the language of signs.

12. In *Science* for December 26, Dr. Bell expresses his entire dissent from Dr. Gillett's opinion that deafness is not a very great calamity, and in that connection refers to the greater expense of educating deaf children as compared with hearing children. "The average *per capita* granted for the education of hearing children is less than $20 *per annum;* whereas in the case of the deaf it exceeds $200." He quotes Dr. Gillett's estimate that "not two per cent. of the deaf and dumb are the children of deaf parents," and shows that two per cent.

is a proportion nearly thirty times as great as the percentage of deaf persons in the whole population. He continues:

> Nor must it be forgotten that Dr. Gillett's percentage is taken upon the whole of the deaf-mute population (which, of course, includes children and unmarried adults); whereas the deaf offspring are the products of the married couples alone. Indeed, as President Gallaudet points out (*Science*, Nov. 28, p. 295), they are chiefly the offspring of couples in which one or both of the parties were *born* deaf, or come from families containing more than one deaf-mute. Sporadic deafness (if not congenital) is rarely inherited, and the majority of the marriages of the deaf are free from deaf offspring. How prolific of deaf offspring the remaining marriages must be, if their children alone constitute a percentage of the whole deaf-mute population nearly thirty times as great as the normal percentage for the country!

Dr. Bell complains of the indefiniteness of Dr. Gillett's statement in "Facts and Opinions" that "of 1,886 deaf-mutes admitted to the Illinois Institution, 293 were known to have married, and that among these only sixteen have deaf-mute children," and asks for further particulars, such as "the number of families having deaf children, the number of deaf children, what percentage of the offspring were deaf and what hearing," and, especially, "what percentage of the children were deaf in those cases where the married partners were both deaf from birth, and in those cases where both had deaf relatives." He also calls attention to the fact that these 1,886 deaf-mutes included the pupils who were then in school, and maintains that "if you take an equal number of marriages of hearing people there should not be *one* deaf child among the offspring." He regards Dr. Gillett as inconsistent in maintaining on the one hand that deafness is not so great a calamity that persons should be deterred from contracting marriages likely to result in deaf offspring, and on the other that it is so great a calamity as to cut the deaf off from almost everything in life worth living for. He says that he does not propose to *forbid* the deaf to marry, and that his position upon the subject is substantially the same as that taken by President Gallaudet:

> I thoroughly agree with President Gallaudet in all he has said concerning intermarriage, *and thoroughly disagree with the rest of his article!* Dr. Gillett advocates intermarriage because the affliction is so great, and ignores heredity because it is so slight. President Gallaudet's position is, I think, equally inconsistent. He advocates a certain system of education, while at the same time he *deprecates its results.* Segregation and the sign-language are the chief causes that have led to the intermarriages of the deaf and dumb. He advocates the causes while he deplores the result.

A Taste for Reading.—Much has been said in the *Annals* and elsewhere of the importance of cultivating a taste for reading in our pupils, and various means for accomplishing this have been suggested. The following has been found successful in the New Jersey School; we quote from the *Silent Worker*, of November 27, 1890:

A story is told to the pupils, in outline, as an evening exercise, two or three times a week, by means of the finger alphabet. If the pupils are much interested in it they will ask for the book. If the demand is general the book goes down on the list for the next month's purchases. When it comes, it is in eager demand, and is read by many who would not have cared to read it but for the knowledge of its contents gained by the explanation given in the chapel lectures. Among the books introduced in this way are Ben Hur, The Prince and the Pauper, Little Lord Fauntleroy, The Black Arrow, Tales from Shakespeare, and others of similar type.

Puzzles and Jokes.—A correspondent writes:

I enjoyed Mr. Caldwell's article in the October *Annals* very much, for I have given pupils puzzles and jokes for years, but I told "it not in Gath nor published it in the streets of Askalon," lest the orthodox should empty upon me the vials of wrath, or forbid my doing it.

Mr. Caldwell is not the only one who has had trouble with *niece* and *piece*, but I remedied the difficulty by teaching the phrase—"a *piece* of *pie* for my *niece*," *pie* being the guiding word.

I think that if newspaper jokers were to teach a class of deaf-mutes, they would find fresher and brighter materials than they use now. Here are a couple of my latest:

"Tell me the name of some *domestic* animal." "Sewing machine." "What?" "Yes, true! my mother has a Domestic."

Again, we were discussing the words "A velvet-skinned peach;" and I asked (thinking of a chestnut), "Did you ever see a nut with a shell like satin?"

"NO! Satin's down in Hell." I cannot reproduce on paper the indignant emphasis of the word NO! nor the scorn with which the child repelled the idea of having *seen* his Satanic Majesty.

Report on Methods of Instruction.—It is proposed to establish a school for the deaf of North and East Lancashire, England, and in September last a committee of gentlemen interested were deputed to visit London to inquire into methods of instruction. On the invitation of Mr. Lionel Van Oven, a member of the recent Royal Commission and a zealous adherent of the oral method, they visited in company with him the Capland-Street Board School, the School and Training Col-

lege under the direction of Mr. Van Praagh, and the Jews' Home. Three members of the deputation also visited the Margate School. The committee unanimously reported as follows:

AUTHORITIES CONSULTED.

We discussed the advantages and disadvantages of the pure oral system with Mr. L. Van Oven, Mr. Van Praagh, Mr. S. Schöntheil, the Rev. Dr. Stainer, and Dr. Elliott. The first three gentlemen are enthusiasts; they have probably done more than any other three to introduce pure oralism into this country. Mr. Van Oven believes in the universal application of the pure oral system, and its superiority over every other system for all deaf-mutes. Mr. Van Praagh, who holds the same views, has taught on the pure oral system in England since 1867, and he does not know the manual alphabet. Mr. Schöntheil, who also agrees with his countrymen as to the universal superiority of the pure oral system, has been head teacher at the Jews' Home for nearly nineteen years, and has had very little experience of deaf-mutes taught on the finger and sign system. Dr. Stainer, who has had forty-nine years' experience among the deaf and dumb, believes in the superiority of the pure oral system plus the finger alphabet, but declares that the conditions required for its successful teaching are impossible conditions. He says that the pure oral system requires one teacher to a pupil, unlimited time and means, that pupil never to see another deaf-mute as long as he lives, and that with all these conditions the pupil will not be able to engage in "ordinary conversation" with the hearing world. Dr. Elliott is a convert to the general superiority of the oral system, but thinks with Dr. Stainer and other authorities that there will always be a considerable percentage of deaf-mutes who will require to be taught by the silent system.

RESULTS.

We saw one deaf gentleman and one deaf lady who can engage agreeably in what might reasonably be called ordinary conversation. The gentleman was an ex-pupil of Mr. Van Praagh's who had had every advantage that money, time, and good teachers could afford. The lady is a teacher in the sign department of the Margate Institution, and was taught there on the combined system. She lost her hearing when about eight years of age, but has learned lip-reading thoroughly, and retained her speech. We saw three other ex-pupils of Mr. Van Praagh's whose articulation may fairly be called speech, and whose lip-reading in conversation on simple subjects was very fair. At the Jews' Home we saw an ex-pupil of Mr. Schöntheil's, who could speak and lip-read on simple subjects with facility. In the first two cases we consider the results excellent; in three out of the other four very satisfactory.

In the first class of Mr. Schöntheil's school, consisting of three bright girls and two boys, we saw most intelligent lip-reading, and evidence of patient teaching of the highest excellence. The senior pupils at Fitzroy Square were able to receive religious instruction on simple and familiar subjects from the lips of Miss Ferrier, who is a very excellent teacher. In a reading lesson for the most advanced of these pupils conducted by

another teacher we were seriously disappointed, and we were also disappointed with the ability of the pupils to engage in conversation with us, even on the simplest subjects. These results were the best we saw at the pure oral schools, and they were only attained by the brightest of the pupils. Some of the results we saw were indifferent, others bad. We saw no good results in the Board School, where the conditions are inferior to those of Fitzroy Square and the Jews' Home.

The lip-reading and speech we saw and heard at Margate were almost, if not quite, equal to the best we saw at the pure oral schools, and we were convinced that there is no disadvantage to the oral pupils in allowing them to associate with the sign-taught pupils after school hours. Language is equally well taught at Margate in both departments. Religious services are conducted both orally and by signs.

PURE ORALISM.

We believe Dr. Stainer was right when he told the Royal Commission that pure oralism is an idea, not a reality.

The Board School children converse in the finger and sign language in the play-ground. This is denied; but Dr. Stainer, who is superintendent of over 400 Board School children in London, assured us that the children invariably talk on their fingers to one another when out of the teacher's sight, and never by word of mouth.

The finger alphabet is not supposed to be known at Fitzroy Square, but natural gestures are admittedly used in the earlier stages of instruction; afterwards discouraged.

Natural signs, and at least one conventional sign, were spontaneously and instinctively used by the ex-pupil produced by Mr. Schöntheil, though she was a good speaker and lip-reader, and spoke the words at the same moment as she gave the signs. She is employed as a domestic servant in his household.

All the pupils at Margate know the finger and sign language.

Dr. Stainer advocates the teaching of the finger alphabet to all oral pupils before they leave the school.

CONCLUSIONS.

"Pure" oralism is (1) "An idea, not a reality;" (2) a useless task to dull pupils; (3) unsatisfactory for a large number of pupils; (4) entirely successful only in exceptional cases, and under conditions that are generally impracticable, and often impossible.

Speech and lip-reading are nevertheless so advantageous to the deaf and dumb that all who are capable of acquiring it ought to be taught by the oral (not pure oral) system. About 25 per cent. can be more advantageously taught by the sign and manual method. We, therefore, conclude that a dual system is a necessity.

Speech and lip-reading can be taught as well under the dual system as under the so-called pure oral.

Deaf-mutes ought all to know the finger alphabet, though it need not be taught in the oral classes.

We have previously resolved to adopt "the most approved form of the combined system," and to give "all the advantages of an oral train-

ing to those deaf-mutes who are capable of receiving it, without excluding the natural language of signs." After visiting the best oral schools in this country, our opinion is that a dual system, as defined below, will answer all requirements, and we recommend that this system shall be taught in our school:

(1) Give every child a year's trial in the oral department of the school, as recommended by the Royal Commission.

(2) At the end of twelve months remove those to the sign and manual department whom the head master thinks can be best taught there, as also recommended by the Royal Commission.

(3) Grade oral pupils thoroughly and periodically, allowing one teacher not more than ten pupils, and providing a separate teacher for four or five pupils in case of necessity.

(4) Teach speech by lip-reading and auricular methods, each child being medically examined and treated according to his special qualifications.

(5) Allow oral pupils to associate with the sign-taught pupils in the play-grounds, etc. This is not hurtful, but beneficial.

(6) Arrange the school in recognized standards, and give the same lessons in language, and in general and religious knowledge, in both departments.

JNO. GEO. SHAW.
J. DUTHIE.
T. COOKSON.
J. D. HARRISON, *Hon. Sec.*

PRESTON, *Sept.* 29, 1890.

Occupations of the Deaf.—In the paper on "Some Results of College Work" read before the Convention of Instructors in New York, which is also printed in the last Annual Report of the Columbia Institution, Professor Draper gives the following table of the occupations of the eighty-nine young men who have been graduated from the National College:

Unascertained at this writing (of whom one died soon after graduating)	4
Foreman of a daily newspaper	1
First assistant postmaster of a city, and editorial writer	1
Clerk to a recorder of deeds	1
Official botanist of a State	1
Deputy recorder of deeds in a leading city	1
Teachers	34
Teacher, and principal of a leading institution	1
Teachers, and founders of schools	5
Teacher, founder of a school, and principal of an institution	1
Teacher, principal of a leading institution, authority in microscopy, merchant in iron and steel	1
Teachers, and editors of papers for the deaf	4
Assistant professors in the College	2

United States examiner of patents, and attorney in patent law	1
Clerks in United States Departments, and teachers	4
Clerk to the Librarian of Congress, and teacher	1
Clerks in United States Departments, custom-houses, and post-offices	8
Editors and publishers of country newspapers, and general printers	2
Bank clerk	1
Farmers and teachers	2
Ranchman	1
Teacher, and fruit-grower	1
Insurance clerk	1
Expert in the finishing of lenses	1
Publisher of a paper for the Methodist Publication Society	1
Teachers and missionaries among the deaf	3
Architect's draughtsman	1
Architect	1
Practical chemists	2
Partner in wholesale milling and flouring business	1
Total	89

In the last Report of the Kansas Institution Mr. Walker gives the following incomplete table of the occupations of former pupils:

72 are farmers, or working at farming.	1 is a barber.
31 are shoemaking.	1 is a shipping clerk.
30 are carpenters and cabinet-makers.	1 is a clerk.
21 are printers.	3 are housemaids.
17 are laborers.	2 are teachers.
5 are artists.	1 is a stone mason.
2 are stock-raisers.	1 is a dairyman.
2 are bakers.	1 is a Government clerk.
1 is a draughtsman.	1 is an editor of a Kansas newspaper.
1 is a milliner.	1 is a tailor.
1 is a dressmaker.	1 is a coal miner.
	1 is a miller's assistant.

Darwin on the Marriages of the Deaf.—Dr. Alexander Graham Bell calls our attention to the interesting fact that the late Charles Darwin regarded the marriages of deaf-mutes as unlikely to result in deaf offspring, and hence constituting an exceptional case in heredity. He says in "Animals and Plants under Domestication," vol. I, chapter xii, pages 465, 466:

It is a singular fact that, although several deaf-mutes often occur in the same family, and though their cousins and other relations are often in the same condition, yet their parents are rarely deaf-mutes. To give a

single instance: not one scholar out of 148, who were at the same time in the London Institution, was the child of parents similarly affected. So again, when a male or female deaf-mute marries a sound person, their children are most rarely affected: in Ireland, out of 203 children thus produced, one alone was mute. Even when both parents have been deaf-mutes, as in the case of forty-one marriages in the United States, and of six in Ireland, only two deaf and dumb children were produced. Mr. Sedgwick,* in commenting on this remarkable and fortunate failure in the power of transmission in the direct line, remarks that it may possibly be owing to "excess having reversed the action of some natural law in development." But it is safer in the present state of our knowledge to look at the whole case as simply unintelligible.

How Sicard Exhibited his Pupils.—Mr. Douglas Tilden sends us the following from Paris:

An article in the *Deaf-Mutes' Journal* for Nov. 27, 1890, reminds me of a conversation I had not long ago with Mr. Joseph Theobald, of Paris, on the subject of Sicard's show pupils. Mr. Theobald is quite an elderly gentleman, and used to know the old pupils (however, not Clerc and Massieu) who took part in Sicard's exercises, or at least knew how they were conducted.

One method of Sicard's was this: He beforehand coached his pupils on divers topics, such as charity, gratitude, etc., and at the exhibition he distributed sheets of paper among the audience and requested them to jot down such questions as they would like to ask the pupils. After collecting them, he would, in full view of the audience, silently read the papers one after another, and then suddenly pause and read aloud, as if from the paper, "What is charity?" and then, turning to the pupil, give him the same question in signs. There was no such question on the paper, and perhaps there was nothing on any of the papers that the pupils could write about successfully. The audience, seeing the honest priest reading aloud from the paper, concluded therefrom that somebody among them had written that question. So the delusion was complete.

For fear the papers might fall into other hands, Sicard put them, as the exhibition progressed, under the scarf that is worn around the body as we see it in the statue of the Abbe de l'Épée.

Laura Bridgman's Brain.—The *American Journal of Psychology* for September, 1890, contains an anatomical study of Laura Bridgman's brain and sense-organs, by Professor H. H. Donaldson, of Clark University, the object being to determine, if possible, whether her peculiar mental existence, which was the result of her defective sense-organs, left any trace on

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* *British and Foreign Med. Chirug. Review*, July, 1861, pp. 200–204. Mr. Sedgwick has given such full details on this subject, with ample references, that I need refer to no other authorities.

her brain, or whether such anomalies as might be observed were sufficiently explained when considered as the direct consequences of the initial defect alone. Professor Donaldson sets forth the various tests applied in the examination of the brain and the results obtained. So far as appears in the present article no striking divergence from the average human brain was discovered, but, as might have been expected, there was evidence of certain slight abnormalities of the speech and sight centres, probably due to incomplete development. The weight of the brain was slightly below the average, which may also have been the result of arrested development. The subject is to be further treated in a second article.

Translation of Bonet.—Mr. Farrar informs us that Mr. Dixon's English translation of Bonet's "Analysis of the Letters and Method of Teaching the Dumb to Speak," mentioned in the last volume of the *Annals*, page 87, is now printed and ready for delivery to subscribers. A copy has not yet reached us, but we need not wait for that to recommend a book so well known. In addition to the translation the volume contains an elaborate introduction by Mr. Farrar, giving valuable matter never before published. It ought to be in the library of every teacher and every school for the deaf; and teachers and schools that have no library will do well to begin the formation of one by obtaining this book. It will be forwarded to any address in the United States or Canada for one dollar, which may be sent by post-office money order to A. Farrar, Jr., The Grange, Beech Grove, Harrogate, England.

The De Haerne Memorial.—In response to the suggestion of President Gallaudet made in the *Annals* of last July and at the New York Convention, the sum of $102.10 has been contributed by friends in America toward the proposed statue of the late Mgr. De Haerne. The contributors were Alexander Graham Bell, E. M. Gallaudet, Isaac Lewis Peet, M. T. Gass, J. L. Noyes, J. H. Johnson, A. L. E. Crouter, D. Greenberger, Caroline A. Yale, J. W. Swiler, W. Wilkinson, and R. Mathison.

A Deaf Author.—Mr. Alexander Brown, of Union Hill, Nelson county, Va., has recently published a valuable contribution

to historical knowledge, entitled "The Genesis of the United States." (Houghton, Mifflin & Co.) It is in two large octavo volumes, and contains a series of historical manuscripts now first printed, together with a reissue of rare contemporaneous tracts, accompanied by bibliographical memoranda, notes, and brief biographies. The work was begun in 1876, and, as the author says in his preface, has been a long, laborious, and expensive task, obliging him to practise every self-denial and to overcome difficulties which would have baffled many men.

The special interest of the work for the readers of the *Annals* lies in the fact that Mr. Brown is, and has been for several years, totally deaf.

The Growth and Progress of the Schools.—The growth and progress of the Schools for the Deaf in the United States since the establishment of the first school in 1817 may be seen from the following table, which is compiled from some of the tables that have been published within this period:

Year.	Number of Schools.	Number of Pupils.				Number of Instructors.				
		Total.	Male.	Female.	No. taught articulation.	Total.	Male.	Female.	Deaf.	Articulation.
1817	1	12	.....	.....	.....	2	2	.....	.....	.....
1820	3	.....	.....	.....	.....	.....	.....	...	.....	.....
1830	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
1840	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1850	12	1,148	.....	.....	.....	66	63	3	24	.....
1860	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
1866	26	.....	.....	.....	5	.....	.....	.....	.....	1
1870	34	3,784	2,132	1,652	.....	222	134	87	94	.....
1880	55	6,798	3,908	2,890	.....	425	203	222	132	.....
1883	58	7,169	4,013	3,156	1,991	497	213	284	151	112
1890	77	8,572	4,846	3,726	3,402	601	248	353	168	182

Reports.—We have received since the last issue of the *Annals* the Reports of the Alabama, Columbia, Genoa, Kansas, Pennsylvania Oral, Texas, and Victorian Institutions, published in 1890; also the Fourteenth Report of Church Work in the Mid-Western Dioceses, and the French Report of the International Congress of Deaf-Mutes held in 1889.

E. A. F.

HELEN KELLER.*

Mute, sightless visitant,
From what uncharted world
Hast voyaged into Life's rude sea,
With guidance scant;
As if some bark mysteriously
Should hither glide, with spars aslant
And sails all furled?

In what perpetual dawn,
Child of the spotless brow,
Hast kept thy spirit far withdrawn—
Thy birthright undefiled?
What views to thy sealed eyes appear?
What voices mayst thou hear
Speak as we know not how?
Of grief and sin hast thou,
O radiant child,
Even thou, a share? Can mortal taint
Have power on thee unfearing
The woes our sight, our hearing,
Learn from Earth's crime and plaint?

Not as we see
Earth, sky, insensate forms, ourselves,
Thou seest,—but vision-free
Thy fancy soars and delves,
Albeit no sounds to us relate
The wondrous things
Thy brave imaginings
Within their starry night create.

Pity thy unconfined
Clear spirit, whose enfranchised eyes
Use not their grosser sense?
Ah, no! thy bright intelligence
Hath its own Paradise,
A realm wherein to hear and see
Things hidden from our kind.
Not thou, not thou—'tis we
Are deaf, are dumb, are blind!

EDMUND CLARENCE STEDMAN.

ADVERTISEMENT.

ORAL TRAINING SCHOOL FOR TEACHERS OF THE DEAF, established 1881. About twenty-five graduates teaching in institutions, schools, and private families throughout the United States. For further particulars address Miss EMMA GARRETT, *Principal, Pennsylvania Oral School for the Deaf, Scranton, Pa.*

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* From the New York *Independent.*

American Annals of the Deaf.

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Address the Editor of the Annals,

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